LEARNING RESOURCES CTR/NEW ENGLAND TECH.
GEN F3063.C29 1923
Carpenter, F The tail of the hemisphere
3 0147 0000 7263 0

F 3063 .C29 1923

Carpenter, Frank G. 1855-
1924.

The tail of the hemisphere:
Chile and Argentina

DATE DUE

DEMCO 38-297

NEW ENGLAND INSTITUTE
OF TECHNOLOGY
LEARNING RESOURCES CENTER

# CARPENTER'S WORLD TRAVELS

*Familiar Talks About Countries and Peoples*

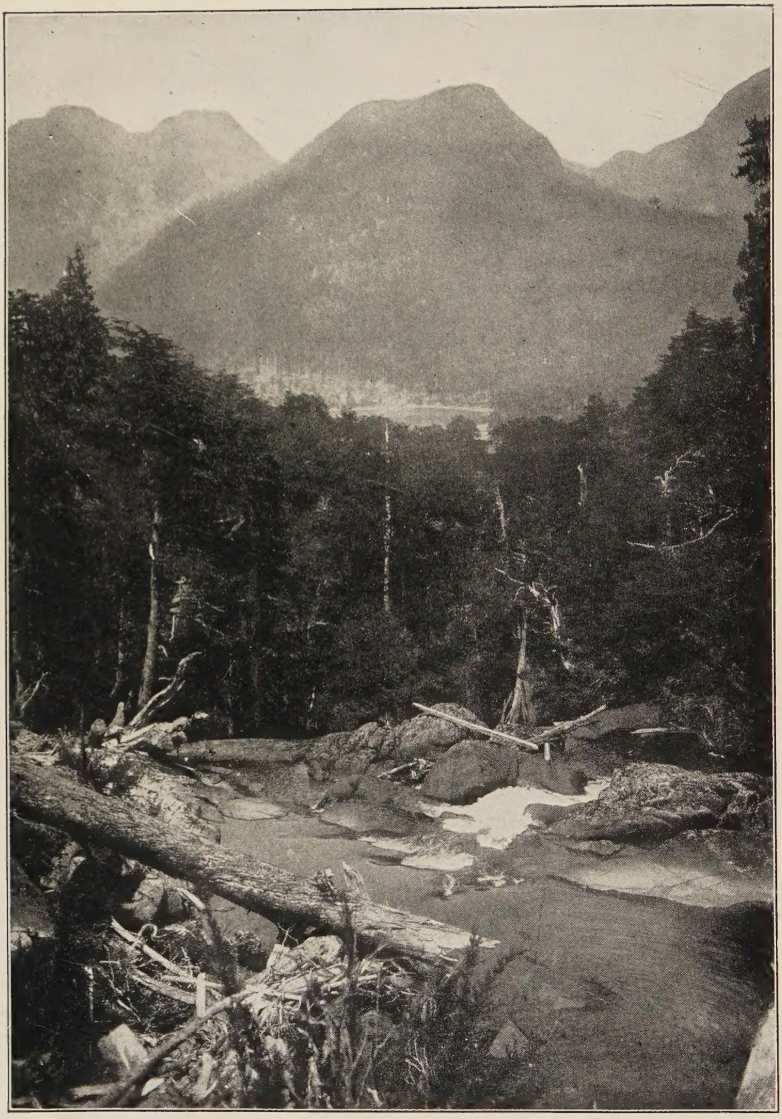
WITH THE AUTHOR ON THE SPOT AND THE READER IN HIS HOME, BASED ON THREE HUNDRED THOUSAND MILES OF TRAVEL OVER THE GLOBE

# THE TAIL OF THE HEMISPHERE

## CHILE AND ARGENTINA

Digitized by the Internet Archive
in 2025

https://archive.org/details/tailofhemisphere0000fran



CHILE AND ARGENTINA

share between them the beauties of the Cordilleras, the mighty backbone of the continent that separates the two republics and at Panama links South America to our own land.

*CARPENTER'S WORLD TRAVELS*

# THE TAIL OF THE HEMISPHERE

## CHILE AND ARGENTINA

BY

FRANK G. CARPENTER
LITT. D., F. R. G. S.

Passionist Sisters
MOUNT ST. JOSEPH
College Library

WITH 111 ILLUSTRATIONS
FROM ORIGINAL PHOTOGRAPHS
AND TWO MAPS IN COLOUR

GARDEN CITY NEW YORK
DOUBLEDAY, PAGE & COMPANY
1925

NEW ENGLAND INSTITUTE
OF TECHNOLOGY
LEARNING RESOURCES CENTER

#6507639

COPYRIGHT, 1923, BY FRANK G. CARPENTER.
ALL RIGHTS RESERVED. PRINTED IN THE
UNITED STATES AT THE COUNTRY LIFE
PRESS, GARDEN CITY, N. Y.

## ACKNOWLEDGMENTS

IN THE publication of this book on Chile and Argentina, I wish to thank the Secretary of State for letters which have given me the assistance of the official representatives of our government in the countries visited. I thank also our Secretary of Agriculture and our Secretary of Labour for appointing me an Honorary Commissioner of their Departments in foreign lands. These credentials have been of the greatest value, making available sources of information seldom open to the ordinary traveller. To their Excellencies, the Ambassadors of Chile and Argentina, who have honoured me by reading in manuscript the chapters relating to their respective countries, I desire to express my sincere appreciation.

I acknowledge also the assistance and coöperation of Mr. Dudley Harmon, my editor, and of Miss Ellen McB. Brown and Miss Josephine Lehmann, my associate editors, in the revision of the notes dictated or penned by me on the ground.

While most of the illustrations are from my own negatives, these have been supplemented by photographs from the United States Department of Agriculture, the National City Bank of New York, the Publishers' Photo Service, and the Pan-American Union.

F. G. C.

## CONTENTS


| CHAPTER | | PAGE |
|---|---|---|
| I | Just a Word before We Start . . . | 1 |
| II | Chile's Andean Gateway . . . . . | 3 |
| III | In the Nitrate Desert . . . . . | 10 |
| IV | The Chile of To-day . . . . . | 18 |
| V | Yankee Enterprise on the West Coast | 30 |
| VI | The Nerve Centre of the Nation . . | 37 |
| VII | How the Republic Is Governed . . . | 46 |
| VIII | Among the Chilenos . . . . . | 53 |
| IX | Big Farms of the Central Valley . . | 60 |
| X | Winter Fruits for American Tables . | 65 |
| XI | Concepción and the Lota Mines . . . | 73 |
| XII | The Story of the Araucanians . . . | 79 |
| XIII | South Deutschland . . . . . | 87 |
| XIV | The Railroad Backbone of Chile . . | 94 |
| XV | Through the Strait of Magellan . . | 102 |
| XVI | The Southernmost City of the World . | 114 |
| XVII | Tierra del Fuego . . . . . | 121 |
| XVIII | In the Falkland Islands . . . . . | 129 |
| XIX | Over the Andes by Rail . . . . . | 139 |
| XX | A Vineyard Oasis . . . . . | 147 |

# CONTENTS


| CHAPTER | | PAGE |
|---|---|---|
| XXI | Across the Pampas | 155 |
| XXII | Argentina and the United States Compared | 159 |
| XXIII | Buenos Aires | 164 |
| XXIV | High Life in the Capital | 172 |
| XXV | With the Workers | 181 |
| XXVI | The Government of the Republic. | 188 |
| XXVII | Settlers and Swallows | 195 |
| XXVIII | Our Opportunity in Argentina | 203 |
| XXIX | A Day on an Estancia | 214 |
| XXX | Beef and Butter for Our Markets. | 224 |
| XXXI | Mainly about Horses | 232 |
| XXXII | Wheat Lands of the Parana | 239 |
| XXXIII | The Terrible Locust | 244 |
| XXXIV | The World's Second Sheep Country | 249 |
| XXXV | The Condor and the Ostrich | 256 |
| XXXVI | The National Sugar Bowl | 260 |
| XXXVII | Land Barons at the Seaside | 266 |
| XXXVIII | Argentine Railways | 274 |
| XXXIX | Building a New Empire | 281 |
| Bibliography | | 289 |
| Index | | 293 |

## LIST OF ILLUSTRATIONS


| | FACING PAGE |
|---|---|
| The beauties of the Cordilleras | *Frontispiece* |
| The Andean beast of burden | 2 |
| Antofagasta | 3 |
| The fuel of the natives | 3 |
| Lake of borax | 6 |
| Digging out nitrate | 14 |
| Refining the nitrate | 15 |
| Valparaiso harbour | 18 |
| How milk is sold | 19 |
| Robinson Crusoe's Island | 19 |
| Women street-car conductors | 22 |
| The Braden mines | 23 |
| A mountain of iron | 30 |
| A Santiago arcade | 31 |
| Santiago from Santa Lucia | 38 |
| Entrance to Santa Lucia | 38 |
| In the Quinta Normal | 39 |
| At the Chilean White House | 46 |
| The race track | 47 |
| Where Congress sits | 47 |
| The bread seller | 54 |
| Women going to church | 55 |
| A Chilean beauty | 62 |
| The hacienda | 63 |
| In the central valley | 70 |

# ILLUSTRATIONS


FACING PAGE

Home of the Inquilino . . . . . 71
In the market . . . . . 71
Fruit king of Chile . . . . . 78
The land of orchards . . . . . 78
Coal mines under the sea . . . . . 79
The ox cart . . . . . 79
Araucanian woman . . . . . 82
Indian cemetery . . . . . 83
An Araucanian home . . . . . 86
The homesteader . . . . . 87
Valdivia . . . . . 87
Chilean landscape . . . . . 94
The rack and pinion railroad . . . . . 95
Trainload of nitrate . . . . . 98
On the Transandine Railway . . . . . 98
The Falls of Laja . . . . . 99
Cape Pillar . . . . . 102
The Alacalufes . . . . . 103
In the Strait of Magellan . . . . . 110
Punta Arenas . . . . . 111
The boundary tree . . . . . 118
Ushuaia . . . . . 119
The hunters . . . . . 126
Forests of Tierra del Fuego . . . . . 127
Tussock grass . . . . . 130
Christ of the Andes . . . . . 131
Argentine customs guard . . . . . 134
The old trail . . . . . 135
Snow on the Transandine . . . . . 142
In the vineyard . . . . . 143
Mendoza River . . . . . 146

# ILLUSTRATIONS


FACING PAGE

Argentine cattle . . . . . 147
Windmills in the pampas . . . . . 150
Making the corn crib . . . . . 151
At the race track . . . . . 158
In the Chaco . . . . . 159
Residences in Buenos Aires . . . . . 166
The subway . . . . . 167
A suburban estate . . . . . 174
Florida Street . . . . . 175
On the water at El Tigre . . . . . 182
The industrial school . . . . . 183
An immigrant's home . . . . . 190
The gaucho's lunch . . . . . 190
The Avenida de Mayo . . . . . 191
The Argentine Capitol . . . . . 198
Palaces of Recoleta Cemetery . . . . . 199
Where immigrants are lodged . . . . . 206
On their way to the land . . . . . 206
Immigrant girls . . . . . 207
On the waterfront . . . . . 210
American machinery at work . . . . . 211
The big-wheeled wagon . . . . . 214
High-priced stock . . . . . 215
On San Juan . . . . . 222
On the estancia . . . . . 223
In the cattle corral . . . . . 226
Feeding on alfalfa . . . . . 226
Loading beef for New York . . . . . 227
The milking station . . . . . 230
The dairy . . . . . 230
The gaucho . . . . . 231

## ILLUSTRATIONS


FACING PAGE

At the horse sale . . . . . 238
Thoroughbreds . . . . . 238
Up the Paraná . . . . . 239
Patagonian landscape . . . . . 242
Threshing . . . . . 242
The grain docks . . . . . 243
An outdoor theatre . . . . . 246
Argentine sheep . . . . . 247
At the grain port . . . . . 250
Opening up new lands . . . . . 251
Herding the flock . . . . . 254
In the wool market . . . . . 255
The guanaco . . . . . 258
The Andean condor . . . . . 259
Sheep lands of the south . . . . . 259
In Tucumán . . . . . 262
Indians of Corrientes . . . . . 263
The road to the west . . . . . 270
At Mar del Plata . . . . . 271
On the Rambla . . . . . 278
Open-air grain storage . . . . . 279
The wood burner . . . . . 286
The Retiro station . . . . . 286
The araucaria tree . . . . . 287


## MAPS


North and South America . . . . . 50
Chile and Argentina . . . . . 66

# THE TAIL OF THE HEMISPHERE

## CHILE AND ARGENTINA

# THE TAIL OF THE HEMISPHERE

## CHILE AND ARGENTINA

## CHAPTER I

### JUST A WORD BEFORE WE START

THE travels upon which these talks are based form a part of two journeys I have made around the South American continent. In each case I started at Panama and went leisurely southward down the Pacific coast, with long tours inland from the principal ports to see the countries and peoples. Much of the time was spent in the tops of the Andes, and it was from the high plateau of Bolivia that I came down the arid slope of the Andes and began my trip across the great desert of Chile to its chief seaport, Antofagasta. From there I turned northward to the rainless city of Iquique, and passed back and forth over the immense nitrate fields which so enrich the farms of the world. Moving southward again, I visited the various cities along the coast to Valparaiso, whence I went inland to the central valley of Chile and traversed it from one end to the other.

At Concepción I took ship for the Strait of Magellan, passing through the dangerous and intricate windings of Smyth's Channel, skirting northern Tierra del Fuego, and making my way two hundred miles eastward to the Falkland Islands, whence I steamed north to Buenos Aires to begin my travels in the Argentine Republic.

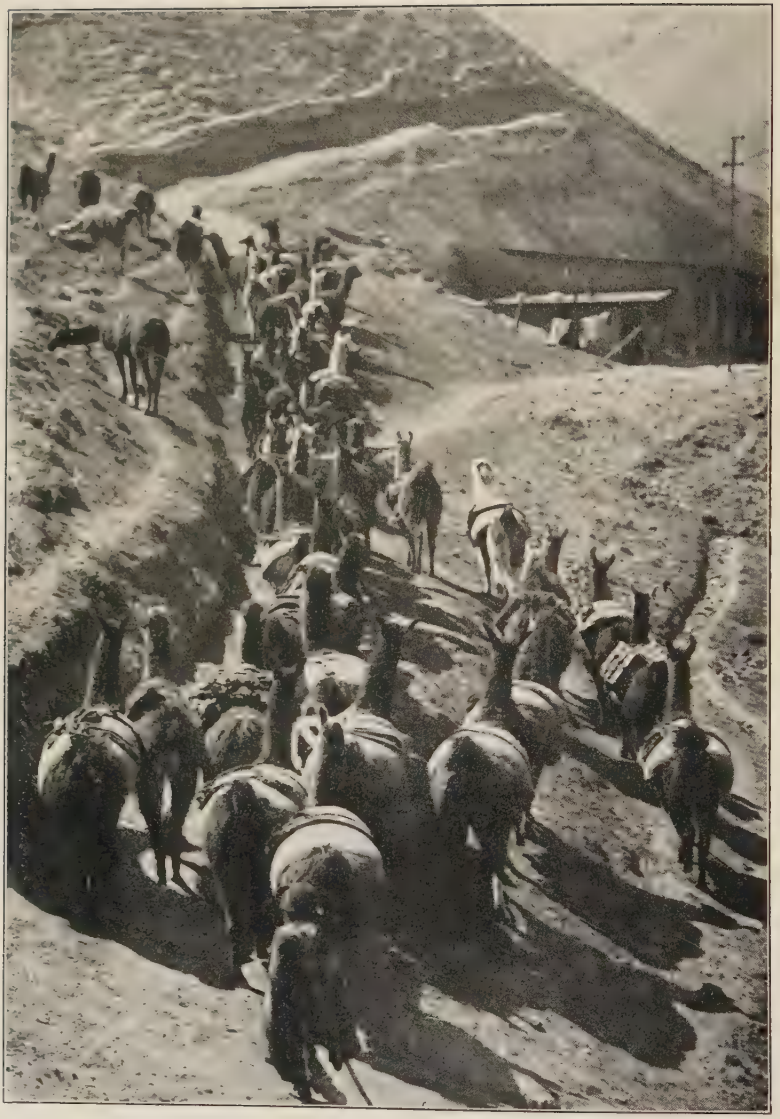
In the other journey I spent more time in the interior of the two countries, revisiting the deserts and the farming regions of Chile, devoting a part of my time to the capital, Santiago, and then going across the Andes by rail to Buenos Aires.

My travels in Argentina were made by boat, by rail, and by automobile. I have been in nearly every part of that country including the foothills of the Andes, the deserts of Patagonia, the long river valleys, the vast pampas, and the fertile corn lands of Entre Rios.

The sole object of these trips was to get the information comprised in these talks, and my reader has been ever before me. I have looked upon him as my friend, and have written my notes as though we were chatting together, out on the porch in the summer, or perhaps about the fire in the winter, without any other object than to reproduce the pictures as they passed before my eyes. For this reason the notes are presented as they came hot from my pen, with only the slight revision here and there needed to make them accord with changing conditions. If they can give as much pleasure in the reading as I have had in the writing I shall feel that my work has been well worth the time and labour it has entailed.

The bare, grim walls of the Andes rising behind Antofagasta and the surrounding desert contain some of the world's richest deposits of iron, tin, copper, and nitrates, and have made the city the chief Pacific port between Valparaiso and Panama.

"One of the reasons mining operations in the Andes are so expensive is the scarcity of fuel. I have frequently seen stacks of the only wood available, twigs and branches of stunted trees. Coal has to be imported."



When weary, the llama, the beast of burden of the Andes of northernmost Chile, lies down and nothing will get him up till his pack is removed.

## CHAPTER II

### CHILE'S ANDEAN GATEWAY

I HAVE just taken a mighty slide from the roof of the world to the level of the sea. I have come from the tops of the Andes, in Bolivia, to the shores of the Pacific Ocean in Chile, and am now writing in Antofagasta, the chief port of one of the richest though most barren parts of the earth. Antofagasta lies halfway down the South American desert. It is twenty-four hundred miles from Panama and two days and more from the great port of Valparaiso. Though it belongs to Chile, it forms the chief gateway to Bolivia and the mighty treasure vaults of the Andes. It is also the gateway to the nitrate fields and to the many other wonders of this arid region. Through it passes most of the borax used by mankind, and out of it come vast quantities of copper and tin.

Within one hundred and sixty-two miles of Antofagasta is Chuquicamata, where the Chile Copper Company owns enormous copper deposits which have produced as much as seven million pounds a month. Farther north are the Uyuni tin mines and still farther inland the tin of Potosí and Oruro. A river of minerals flows through this port and the stream will increase in volume with the development of the great deposits of the interior. Antofagasta is also the starting point of the new Transandine road which is to cross the continent by way of Uyuni, Tupiza, and the Argentine system.

The port, which is growing like thistles on the mountain farms of Virginia, looks more like a town of the great American desert than anything I have seen in South America. The houses are mostly of wood, roofed with galvanized iron. The streets are wide and many of them are unpaved. The characteristic sights of the Andes have disappeared. There are no blanketed Indians and no llamas; wagons, carts, and cabs have taken their places. The town is cosmopolitan. Moving through its streets, one hears every language spoken and is jostled by British and Germans, Austrians and French; but most of the people are Chileans.

Though the harbour of Antofagasta is poor, it is filled with shipping. The wharves are heaped high with goods. There are stacks of Oregon pine, piles of bags of American flour, and cords of steel rails and structural steel made by our steel mills. The place is the busiest of all the ports between Valparaiso and Panama, and sends northward through the Panama Canal valuable cargoes of the nitrate, borax, copper, tin, and other minerals from the regions at its back.

My route from La Paz, in Bolivia, to Oruro was the same I took years ago, when I rode for three days over the plateau on the top of a mail wagon. We pelted the mules' ears with stones and kept them on the gallop from daylight to dark. It was so cold we almost froze at the rude inns of the highlands. My journey this time was made in comfort by rail, and the trip from the tops of the Andes to Antofagasta took only two days. Our train had Bolivian millionaires, English, Australian, and American commercial travellers, miners of a half-dozen different nationalities, and a number of tourists. We stopped for six

hours at Oruro and there got sleeping compartments; there were dining cars, and we travelled in comparative ease.

This time I found travel much cheaper. Our sleeping berths cost us three dollars a night, and the first-class passenger rate was about twenty-four dollars, with a charge for baggage of about two cents per pound. The price for meals on the diner was a dollar and a half in gold, with an extra charge for mineral water about twice that of the United States.

The high plateau of Bolivia is a semi-desert country about five hundred miles long and of varying width. Its only vegetation is half-starved grass and dry bushes, but it feeds thousands of sheep, alpacas, and llamas, and we had animal life in sight almost all of the way down to Oruro. Now and then we passed an Indian village; and always there were the scattered huts of the Aymaras spotting the plain, round in shape, many with roofs made of mud bricks symmetrically laid.

At one of the stations where we stopped to pick up our dining car we saw a great drove of llamas. They had brought fuel to the railroad for shipment to La Paz, and were about to start back with a load of merchandise to a town in the hills. The fuel was what I might call Bolivian cordwood. It consisted of the limbs of stunted evergreens, each as big around as your finger. They had been grubbed from the mountains and packed up in bundles about three feet square and two feet long.

Farther down the road we saw great piles of peat-moss, another fuel that grows in the Andes. It is of a woody, resinous nature, and when lighted gives out a great heat. It grows on top of the ground in round patches ranging in size from the diameter of a washbasin to that of a tub.

Along the railroad we could see the piles of English or Australian coal used by the engines. This was in the shape of briquettes stacked in regular order. They were corded up, as it were, and around the edges of the pile I noticed that a white band had been painted. I asked the reason and was told that it was to prevent the Indians from stealing the coal.

Our ride across the Bolivian plateau was through a country as smooth as a floor. The plateau is covered with stones. It is supposed to have been at one time a vast inland sea, and sea shells are often found upon it. Professor Agassiz said that the water level was three or four hundred feet higher than the level of the present plateau. If so, it has all disappeared, as to-day the only large bodies of water found there are in the lakes, Titicaca and Aullagas. The latter is the home of many wild fowl, and the region about it is filled with birds of various kinds, including wild ducks and flamingoes.

Oruro, six hundred and fifty-three miles from Antofagasta, is a thriving town, twelve thousand feet above the sea in the heart of the Bolivian desert. It has about thirty thousand people, and it carries on a great trade with the tin-mining regions of the interior. Its population rises and falls as the price of tin goes up or down. The town has a government palace, a theatre, a public library, and a mineral museum. It has many business houses and some very good stores. The streets are paved with cobbles, and a rickety carriage jolted me from one end of the town to the other at a cost of five dollars.

Leaving Oruro I took the railroad down to the sea. The trip is over one of the most remarkable routes of the Andes. The greater part of the way is bleak and uninteresting,

Next to the United States, Chile is the world's largest producer of borax, which is found in great lakes high up in the Andes. The peak shown here is an extinct volcano.

but there are several smoking volcanoes, and also salt lakes with green islands apparently floating upon them. After crossing the Chilean boundary we came to the big borax lakes. These are owned by the borax trust, and supply the greater part of that mineral for the whole world. There are, in fact, only three or four places on earth where borax is found in large quantities. There are some deposits on the plateau of Thibet in Asia and others in Death Valley, California. As I looked at the Chilean lakes they seemed to be covered with snow. This "snow" is the borax that rises to the surface and forms a blanket or crust on the water so firm that men can walk on it. It looks so like ice that one feels like stopping the train for a skate. In places the crust had been broken and the floating cakes were being taken out by the workmen to be prepared for the market in the refineries near by. Some of the borax was as clean as the whitest of spun silk; some was as dirty as the snow on a Pittsburgh sidewalk. We were over an hour travelling along the edge of Lake Ascotan, which is twenty-four miles long and the greatest reservoir of borax known.

Shortly after leaving Ascotan we came to the highest pass on the railroad. We were thirteen thousand feet above the sea, and found it bitterly cold at the crossing. The mountains on each side were dusted with snow, while beyond them were several great peaks covered with glaciers. On the way we passed the two mighty volcanoes of San Pedro and San Paulo, or, as we should call them, St. Peter and St. Paul. From St. Peter, which is now active, there rises a constant column of smoke. Its sides are covered with lava that looks as fresh as though it had just come from the crater. This lava is broken into mil-

lions of fragments. It extends for several miles along the slope of the mountains in plain view of the railroad.

St. Peter is one of the most symmetrical of the world's mighty volcanoes. It is as beautifully shaped as Fuji-yama in Japan, Mount Cook in New Zealand, or Mount Moyon in Luzón. The peak rises directly from the plain. The plain is level, with only a few pebbles or boulders here and there. It is perfectly smooth except for these enormous windrows of lava. The rock looks as though it had been broken into pieces by the hammers of giants and piled up by some intelligent force. It is a wonderful sight.

The Andes are said to be the youngest of the mountain masses shoved up out of the sea; and they are in many respects the most wonderful of highlands. From Panama to Patagonia they form a great geological garden such as can be seen in no other part of the world. The combination of desert and rocks and sky gives scenic effects beyond description. Parts of the Andes reveal how the earth was made and the terrible throes involved in its creation. In some places they are more desert-like than the wilds of Arabia or the Sahara and one seems to be upon the very bedrock of the world. Again it is as though Mother Earth, in her original nakedness, were laid out before you upon the dissecting table. The walls of broken lava of which I have spoken are perhaps three hundred feet high. The stones are dark red and are piled in regular, colossal heaps, forming a mass a hundred times the volume of our excavations at Panama. Here the volcanoes have vomited sand; there they have thrown out deposits of rock the size of a walnut, and farther on they have cast up mighty semi-metallic boulders.

The scenery around St. Peter and St. Paul is magni-

ficent. Right between them is a low crater as symmetrically shaped as though cut from the deep red stone by a sculptor, while hard by are the crystal springs that supply Antofagasta with water. The water comes from reservoirs on the roof of the continent, higher than the top of Pike's Peak. The lake is known as the Siloli Spring and has a flow of six thousand tons of water per day. The pipes carrying it down to the coast are over a hundred and ninety miles long. Leaving Bolivia, the whole way down to the sea is through a desert. The only green spots are the railroad stations watered by this pipe line from Siloli Spring.

The mining town of Huanchaca is the centre for the Pulcayo silver mines now owned by a French-Chilean company. These mines, which are said to have given the world nearly five thousand tons of silver within the last twenty-five years, are still yielding enormously. The company uses electricity, getting its force from the Yura River, which develops three thousand horsepower. The mines have twelve miles of tunnels and employ several thousand workmen.

We stopped at Ollague, where a branch line runs off to the Collahuasi copper mines, reputed among the richest in South America. This branch line reaches a height of fifteen thousand eight hundred and nine feet, while that to Potosí, north of Uyuni, is at one point fifteen thousand eight hundred and fourteen feet above the sea. These roads are higher than any of the other railroads of South America except the Morococha branch of the Central of Peru. That line has an altitude of fifteen thousand eight hundred and sixty-five feet, exceeding the Potosí line by fifty feet.

## CHAPTER III

### IN THE NITRATE DESERT

I AM in a land that yields more dollars than the valleys of the Nile, the Euphrates, or the Ganges. Nevertheless, it is as barren as the Sahara. It has not a plant, a tree, a blade of grass, or any green thing. It is a land upon which rains never fall, and where one often has to go a hundred miles for a drink of pure water. It is a land of rocks, stones, and sand, and salty particles that reflect the rays of the tropical sun, inflaming the eyes. It contains the great nitrate belt that runs through the desert and along this west coast from below Antofagasta to the Peruvian boundary.

For several generations these fields have made Chile richer than any other South American country and during the World War the demand for nitrates so increased that the exports amounted to about forty-five dollars to each person in the Chilean Republic. These rich deposits not only pay from sixty to eighty per cent. of all government expenses, but yield fortunes to those who exploit them.

Antofagasta, where I am now, is one of the chief nitrate ports. From it a syndicate, known as the Nitrate Agencies, Limited, exports in the neighbourhood of a billion pounds every year. Its ships are constantly loading at the nitrate ports and sailing for the United States, Europe, or far-off Japan. The syndicate has considerable British capital, but it is under American manage-

ment and its methods are entirely American. The largest owners are W. R. Grace and Company, of New York and London, a firm that has nitrate deposits and factories scattered throughout the desert from Antofagasta to Peru. There are, however, some seventy companies engaged in this business.

Nitrate of soda is one of the richest of fertilizers and has doubled the crops of many an American farm. The United States, which takes about one half of the total production, is now buying more than two hundred million pounds a month. Among the other large consumers are Germany, Great Britain, France, Holland, and Belgium, also Japan and the Hawaiian Islands.

When taken out of the ground and purified, the product looks just like white salt. It is made up of small crystals, or grains, and it is in this shape that it goes to the markets. It is put up in two-hundred-pound bags, which have to be lightered from shore to ships.

The beds of "*salitre*," as the Chileans call it, begin at some distance below Antofagasta and run northward to beyond the port of Iquique, a distance of nearly five hundred miles. They stop just beyond the international boundary, but the deposits of Peru are of such low grade as not to be worth the working.

The richest fields lie in the deserts. They are at an altitude of several thousand feet above the level of the sea, on the western slope of a range of hills, and from twenty to a hundred miles back from the coast. The nitrate belt is seldom more than ten miles in width.

The mineral is not evenly distributed. Much of it is in pockets, although one field covers an area of more than one hundred square miles. Others are confined to a few hun-

dred acres, and the purity of the deposits varies as much as their size. As a rule, the nitrate is close to the surface, cropping out here and there, and seldom extending for more than twenty feet below the level of the desert.

There are many different theories as to the origin of these deposits. One is that this part of Chile was once the floor of an inland sea, and that the nitrates were formed by the decaying of seaweed. Another hypothesis is that the ammonia which arose from the vast beds of guano in the islands off the west coast was carried by the winds to the mainland, where it condensed and united with the other chemicals in the earth to form these beds. A third supposition is that electrical discharges in the Andes combined with the air so as to make nitric acid, which acted on the soil and formed nitrate of soda.

None of these theories is satisfactory, and yet the scientists have little better to offer. Dr. Walter S. Tower of Chicago University says the salts were produced in a great lagoon, once the home of a world of bird life. The lagoon was shallow and the birds waded through it and fed on its shores. Their droppings formed guano, which, as evaporation went on, combined with certain elements in the water and soil to make nitrate of soda. At any rate, the nitrates are here, preserved by the dryness of the desert, which has no moisture to leach them out.

Where the mining is done, the land looks as though it had been ploughed by giants. The earth lies in mammoth clods of all shapes and sizes beyond which are nothing but bleak stretches of sand. There is no sign of vegetation or life of any kind. The rock is in some places white and in others yellow, gray, lemon-coloured, or green. The nitrate lies in strata sometimes well under the surface.

The method of getting it out is to bore a hole a foot in diameter through the layers of sand and rock and blow it out with blasting powder. The powder is made out of nitrate obtained on the spot. The only other chemicals required are charcoal and sulphur. The explosion breaks up the earth for a radius of forty feet around the charges, which are laid in rows so that the mining can be done in trenches. The rock is dug up with picks and crowbars. It is broken into lumps of such size that they can be loaded upon cars and taken to the mills and further reduced by machinery.

Nitrate of soda is seldom found pure in nature, and the best of the deposits contain only from forty to sixty per cent. If the ore has more than twenty per cent. nitrate it is called *caliche*, and if less than that it is *costra*. The *costra* lies on top, and the *caliche* is usually found underneath. Before the material can be used it must be refined and all the earth and rock removed. The laws require that the salts exported must be at least ninety-five per cent. pure.

Since I first visited this region, there are many more *oficinas*, as the nitrate factories are called, and the output has been quadrupled. The average *oficina* is a collection of great buildings with tall smokestacks rising above them. It has thousands of dollars' worth of costly machinery, vast tanks for boiling the nitrate rock, and crushers like those of a smelter that break it to pieces. It has settling vats, in which the liquor containing the pure nitrate of soda is left until it has dropped its burden of valuable salts, and also machines for bagging the salts and loading them on cars that go down to the seacoast by rail.

Some of the largest plants cost millions of pesos and

employ hundreds of men. Some have an output of a half million pounds per day, and there is one which markets in a good year as much as two hundred million pounds.

The work of the big nitrate factory is scientifically done. The fineness of crushing and the time of boiling are carefully regulated. The boiling tanks are usually in a building high above the ground. Each is big enough to form a bathtub for an elephant. It is equipped with coils of steam pipe that keep the temperature of the fluid at the desired point. The *caliche*, or nitrate ore, is carried up an inclined railway and dumped into the tank. Then the water containing a certain portion of nitrate of soda in solution is allowed to flow from tank to tank, so as to act to the best advantage on the salts within. Three or four hours of boiling is necessary to make the liquid of the required density, and when it is run off it looks like a pale molasses or thick lemon syrup. The liquid now goes into the crystallizing tanks, where it lies for ten or fifteen days. During this time the soda all drops to the bottom, and the tank is half full of what looks like pure-white sugar or salt. The mother liquor which floats on top is drawn off and returned to the boiling tank to be used over and over again, and the salt is shovelled out upon drying floors where it remains until the moisture has all disappeared. It is now ready for use and is bagged and shipped down to the coast.

A valuable by-product of the nitrate factories is iodine, the export of which is regulated so as to insure fair prices, as the supply is said to exceed the demand. The casks in which the iodine is shipped are covered with green hides, which shrink and thus prevent leakage.

The experts, particularly the Americans, have intro-

The nitrate deposits lie about twenty feet below the surface, and are mined by boring a hole into the ground and inserting a charge of dynamite. After blasting the salt rock is dug out with crowbars and picks.

Nitrate is refined by melting the crude rock and then allowing the salt to settle in huge vats. As the water is drawn off, the snow-white chemical is left to dry.

duced improved systems that promise to revolutionize the work of the *oficinas*. Before the perfection of the hydro-electric extraction of nitrogen from the air, the Chilean desert was practically without competition, for it furnished ninety-nine per cent. of the world's nitrates. Now up-to-date methods, introduced by leading American firms and being rapidly adopted by the other *oficinas*, seem likely to put the nitrates of Chile beyond competition from the product taken out of the air. Specially designed machinery reduces labour at mine, leaching plant, and shipping point. Furthermore, the final recovery under the new processes is over ninety per cent.

In my talks with the nitrate experts of Chile, I have learned much about the extent of the fields and their future. The Antofagasta manager of the Nitrate Agencies, Limited, estimates that there is enough in sight to supply the world for eighty years more at the present rate of consumption, and there are others who say the nitrate fields will last for more than two centuries. There are three provinces with deposits estimated at over five hundred billion pounds. Other estimates are lower, some claiming that there are now left only about two hundred billion pounds. These estimates do not take into account the new fields which are sure to be found, nor the possibilities of working over the dumps about the *oficinas*, which still contain a large percentage of nitrates.

Said one of the big *oficina* managers to me:

"Our profits are a question of small savings. The difference of a cent in the cost of the reduction of one hundred pounds would mean a profit of at least twelve hundred dollars a month. We must watch everything, especially the matter of labour. Our workmen have to

come from the outside, and their wages are high for this part of the world. The present average is about two dollars a day, although boys are paid less than one dollar. There are altogether about forty thousand men employed in the reduction of nitrate and some of the larger works have from eight hundred to a thousand each. We have to provide houses for the men, and also heat, light, and water, although the cost of these is deducted from their wages."

The water for the nitrate works comes in pipes for a long distance over the desert, and all kinds of food have to be imported. Every company has its own store and pays its wages in blanks instead of in money. Each blank is the size of a poker chip. It has its value marked on it and it can be used at the company stores. It represents so much money and the workman can cash it at any time. The stores are run at a profit and the prices are high. Flour brings more than four dollars a hundred pounds, eggs ten cents apiece, all cuts of meat fifty cents a pound, and beans about six dollars a bushel. Coal oil costs about twenty cents a gallon and coal over one cent a pound. The coal is used for cooking only. Most of it comes from southern Chile, although some is shipped in from England and Australia. The larger *oficinas* have schools for their men, and hospitals and physicians are available.

The nitrate business is the backbone of Iquique, the foundation stone of Antofagasta, and the mainstay of Taltal, Mejillones, Pisagua, Chanaral, and Tocopilla, which are towns of smaller size. Iquique depends entirely on it and, next to Valparaiso and Antofagasta, is the most thriving seaport of the country. It lies on the edge of the sea under bare, ragged hills. For a hundred

miles back and around there is nothing but desert. The country has not one blade of grass, except that fed by the fresh water brought to Iquique in a pipe line seventy-five miles long. Nevertheless, there are over seventy thousand inhabitants. The city has wide streets and an electric car line; it has its newspapers, a theatre, moving-picture shows, and an English club. It has good stores and markets and, although nothing but nitrate of soda is produced and every article used must come from abroad, the people live about as well as those of any other South American city.

To-day most of the nitrate works are owned by stock companies, and nearly all are paying big dividends. Some have doubled and trebled in value since they were organized. When I visited the Agua Santa years ago, its capital was only three million dollars. When that stock was paid in, it was at the rate of ten pesos per share. Since then it has sold for thirty-four times that amount. Some of the biggest *oficinas* have paid for themselves in three years, and not a few have given stock dividends of one hundred and even two hundred per cent.

All of the nitrate fields originally belonged to the government, and have been sold at auction to the highest bidders, the government taking its share of the revenue through the duty charged upon every bag exported. The receipts have been so large that they have led to extravagant expenditures on the part of the officials, and there are wise men in Chile who claim that such an easy-come, easy-go income is bad for the country. They say Chile would be far better off if the people had to pay taxes as in other countries instead of having these nitrate beds provide from two thirds to four fifths of the public expenses.

## CHAPTER IV

### THE CHILE OF TO-DAY

VALPARAISO is one of the chief ports of the world. It is the New York of the west coast of South America, and does more business on the Pacific than any other port except San Francisco. The Panama Canal has greatly stimulated its trade with both the United States and Europe, and the Chileans have been quick to recognize their opportunity in improving this, their country's principal gateway.

Everybody knows of Valparaiso, but few realize just where it is. It is about as far south of the Panama Canal as Boston is distant from Salt Lake City, and it lies in the central part of the coast of this long republic of Chile. The city is about thirteen hundred miles north of the Strait of Magellan. It is the port nearest the capital of the republic, and also the main commercial entrance to the great central valley which forms the chief agricultural region of the country. The town, which has more people than Denver, is rapidly growing. It has gained enormously since the earthquake in 1906 and, notwithstanding many similar disasters in the past, the people go on building as though sure there will be no earthquakes in the future.

Valparaiso has suffered many calamities. Founded only fifty-one years after Columbus discovered America, it had countless adventures with pirates before the earthquake of 1730 demolished the settlement and its forti-

The statue of Arturo Pratt, hero of the war with Peru in 1879, stands at the edge of the harbour of Valparaiso, the busiest port on South America's west coast, and gateway to the rich central valley of Chile.

Fresh milk is sold direct from the cow on some streets of Valparaiso. The calf is taken along to keep her mother good-humoured, but muzzled so as not to steal the stock in trade.

On Robinson Crusoe's Island, wild fruits are growing to-day that are descended from those planted by the castaway, Alexander Selkirk. It is now the site of a penal colony and the fishing ground of lobstermen.

fications. It was soon rebuilt, but another earthquake occurred in 1822. Two decades after that a fire burned up a million dollars' worth of property, and a little later another fire cost the town five million dollars. Then it was bombarded by the Spaniards, who destroyed property to the value of ten millions of dollars, and on top of the whole came the earthquake of 1906, which is said to have cost one hundred and twenty million dollars. Besides the property losses, there were about three thousand persons killed and at least one hundred thousand were made homeless. The entire city along the edge of the sea was laid low and yet that part is now covered with the best business blocks. Wide avenues have been made and the city is larger and handsomer than ever. A great part of Valparaiso has been reclaimed from the sea by filling in with earth and rock from the highlands. This was done before the earthquake, and since then the new building has been upon similar foundations. Many of the new streets are so high that one has to go down steps to get into older buildings still standing.

Extensive improvements of the harbour, such as breakwaters and quays, have been in progress continuously in recent years, but many large ships still anchor at a distance from the shore and their goods and passengers are landed from small boats. The bay about which Valparaiso is built is shaped like a half moon and makes a beautiful setting for the town, which rises almost straight up from the shore, on an amphitheatre of hills so steep that the houses are built upon terraces and the people go from level to level on cog railroads. There is one of these every few blocks, and I could pick them out with my eyes as we came in on the steamer. At night the view from a ship

is especially beautiful. The houses on the hills are ablaze with lights and in addition there are electric lights on the streets, making the whole look like a maze of great fireflies.

The moment we came into port to-day our ship was boarded by *fleteros*, or boatmen, clamouring to take us and our trunks to the shore. I had already been posted as to the prices and arranged with one at a cost of nine dollars in our money to take me through the custom house and to the hotel. A moment later my trunks had been lowered over the side and I was in a boat moving through the busy harbour. We had to watch out for the launches, which were flying this way and that by the score; we passed huge barges of goods being towed to and fro, and darted between many great sailing craft, some of which were loaded with lumber from California and Puget Sound. We went near one Chilean man-of-war, then slipped under the shadow of a dry dock containing a steamer, and finally came to the wharf just opposite the Intendencia or Governor's palace. It took but a short time to go through the customs, and a little later we were driving through the city over streets paved with asphalt and lined with modern stores.

The things that interested me most at first sight were the street cars. These are of two stories with a second tier of seats on the roof. There is an iron stairway at the back leading to the roof, and one can ride through the town as though on an elevated railway. These seats are the best for a view of the city. Besides, the fare is less for a ride on top than in the closed car below. I paid only one cent of our money, and the fare inside was but two cents. Notwithstanding these low rates, I understand that the

line pays big dividends and is said to clear about one million dollars a year.

The conductors are an interesting feature of this car line. They are women; a very few of them are pretty young girls, but the great majority will never see thirty or forty again. The woman conductors were employed on the cars at the time of the war with Peru, when all the men were sent north to fight. The women took their places, and have held them to this day. I am told that they are very good, and more honest than the men. Still, the company keeps a check upon its conductors by making them give each passenger a ticket which is collected by an inspector. The companies also have detectives whom the girls nickname Judases, to see that all pay their fare and that no fares are stolen. The conductresses wear black sailor hats and dark dresses. They have white aprons, in the pockets of which they carry their money and tickets, and strapped round their waists are little boxes for the checks they give the passengers.

Another good feature of the car lines is the use of conspicuous numbers to indicate their routes. This is in accordance with a custom prevailing in some European countries, which should be more generally adopted in the United States.

When I ended my ride I was near one of the cog railroads leading to the upper part of the city. As I entered the station I had another surprise. It was a woman who opened the turnstile and gave me my ticket, and she did her job quite as well as a man. She took my money and then shut me inside a cage like that of an elevator. She rang a bell, and a moment later I was high above the roofs of the buildings along the shore, with a magnificent

view of the ocean below me. I could see the harbour with its shipping and hundreds of small boats at anchor, while away off at one side, around the end of the bay, was the town of Viña del Mar, the summer resort of the Chileans.

In January, February, and March the Chileans go to the coast to get cool. Viña del Mar is the Newport and Atlantic City of the west coast. It has hundreds of luxurious villas like those near Paris, and all the accompaniments of a city of pleasure, such as clubs, golf, lawn tennis, and football. There is a mile track where the Chileans bet on their favourite horses, and where races are run every day throughout the season. Indeed, the whole town looks like one of the great spas of Europe. Most of the houses are of French architecture; and many of them would cost, if built in our country, from fifty to one hundred thousand dollars each. Not a few have beautiful gardens, with hedges of roses, great beds of geraniums, palms, and other tropical plants.

Walking down from the hills of Valparaiso to my hotel, I observed many other things that reminded me of southern Europe. The street cries were like those of Naples or Madrid. Peddlers with baskets of vegetables, fruit, or fish on their heads were calling their wares. The bread wagon was a horse with a great basket on each side of his back, and I saw a woman on a corner who was selling milk fresh from the cow. The cow had a calf standing beside it, because she would not give down her milk unless her baby were present. The calf wore a cloth muzzle, and looked lean and lonesome. I bought a glass of milk for a nickel.

A little farther on I stopped at a bookstore. The clerk spoke English and German and the books were in half-a-

When all the Chilean men went north to fight in the war with Peru, women took the place of the street car conductors and have held the jobs ever since. Most of the cars are double-deckers.

American enterprise in Chile is responsible for the opening up of some of the greatest copper deposits in the world. The Braden mines at Sewell are a part of the Guggenheim properties and have yielded rich returns.

dozen different languages. Valparaiso is a cosmopolitan city. Most of its business is done by foreigners, and there are foreign churches, foreign clubs, and foreign charitable institutions. There is a branch of the Y. M. C. A. and one of the Salvation Army, and a British hospital.

The town is cooler than Santiago. It grows quite as fast. The harbour plans when completed will give a space for safe anchorage equal to about two hundred acres. This will provide for the entry of almost two thousand vessels with a total of seven million tons. A breakwater of a thousand feet and a quay wall about twice as long are planned; also coal wharves, new customs house and warehouse buildings, and modern equipment for loading and unloading goods.

For a month I have been travelling through the northern part of Chile. I have visited port after port, and yet here at Valparaiso I am only a little more than halfway down the coast. Chile is the longest country on earth in proportion to its width. Beginning at Cape Horn, it stretches its way northward like a snake along the western slopes of the Andes for a distance of twenty-seven hundred miles. It is three times as long as Egypt, which runs for nine hundred miles through the desert. Let us suppose that the Chilean snake is a rattler and that the islands off the southernmost coast are the rattles. Then the button would be the rocks of Cape Horn, and the fangs of the rattlesnake would be the river Sama where Chile ends at the Peruvian boundary. This Chilean snake is so long that if you should lay it on the United States from east to west with the button at Boston, its tongue might lick the great Mormon Tabernacle in Salt Lake City, or if you should start it crawling eastward, beginning at Cleveland,

it might go on to New York, and bending southward reach Panama before its rattles had left the city on the Great Lakes.

The area of Chile is also worth notice. The country is on the average from one hundred to one hundred and fifty miles wide and it has, all told, nearly three hundred thousand square miles. That means that Chile is nearly twice as big as California, about five times as large as Georgia, and more than seven times the size of Ohio, Kentucky, or Virginia. It would make four Minnesotas or six Pennsylvanias and have room to spare; and if Texas and Maryland were sliced into bits and put together they would just about fill it. It is more than three times the size of that tight little island of England, Scotland, and Wales.

This long-drawn-out country, running southward from the Equator, has great diversity of climates and resources. In the northern part rain does not fall from one end of the year to the other. At Santiago, in the great central valley, only a short distance east of Valparaiso, there is rain on thirty-one days out of three hundred and sixty-five, while at Valdivia, in the southern part of that valley, it rains on half the days of the year. A little farther south the rainfall is even more abundant. There are localities where the people facetiously say that it rains thirteen months a year. This being the case, the northern part of the land is a desert; the central part is a rich farming country with orchards and vineyards and great haciendas, many of which are watered by irrigation; and the southern part has lands that grow hay, wheat, and oats on broad fields fed by the generous rainfall.

The latter region has also enormous areas of forest. It will surprise you to know that one fourth of all Chile is

wooded and that the Chileans have been cutting down the trees and burning them in order to make farms, as we foolishly did in the past. The forest area of Chile is as large as Ohio and Indiana combined.

The lands of the Strait of Magellan and the archipelago of Tierra del Fuego are more interesting than we might expect. They form the tail of this snake-like republic, and as one looks at it on the map he imagines it to be somewhat like the country that Captain Scott found about the South Pole. On the contrary, the climate is about as mild as that of Sitka, Alaska, which has been compared to that of Cincinnati or Washington City. The sheep there feed out of doors all the year round, and hundreds of millions of pounds of wool are exported from the strait each year. During my first visit to Chile this sheep industry was at its beginning. It has since grown beyond all that was then prophesied and there are now single companies owning more than one million sheep. Southernmost Chile, made up of the submerged ranges of the Andes, some of which are covered with glaciers, has a light fall of snow in the winter, but it seldom lies long and the sheep grub through it for the grass beneath.

All this is in striking contrast with northern Chile, from which I have just come. That part of the republic would have an almost tropical heat were it not that its climate is tempered by the cold Humboldt Current to such an extent that white men can live anywhere near the coast. There are thriving towns at the ports that lie at the end of each little valley watered by the snows of the Andes, and there are cities at the points where nitrate and minerals are shipped to the United States and Europe.

Northern Chile is mainly a desert, but compares favour-

ably with the most fertile parts of the earth in the value of its resources. I have already spoken of the nitrates. The country is also rich in copper and the north Chile ports are outlets for the enormous treasures of the Bolivian Andes. New copper and iron mines are being discovered, and huge deposits of both these minerals are already known. The Guggenheim copper properties near Antofagasta are famous throughout the world, and the iron deposits belonging to the Bethlehem Steel Company down the coast near Coquimbo are the most valuable in the country.

There is one bit of land belonging to Chile as well known, perhaps, as the republic itself, and rich in its association with English literature, if not in its mineral wealth or crops. At dinner a few nights ago I ate delicious lobster caught on Robinson Crusoe's island, which lies off the coast of Chile, about four hundred miles west of Valparaiso and twenty-six hundred miles south of the Panama Canal. It forms one of the group known on the maps as the Juan Fernandez Islands, and is the place where Alexander Selkirk, the real Robinson Crusoe, was cast away. It belongs to Chile, and the government steamers go there several times each year. During my stay in Valparaiso I have talked with men who know the island well and are acquainted with its present condition as well as its world-famous story.

They describe it as a paradise. It has plenty of rain and is covered with a luxuriant vegetation. It is affected by the Antarctic Current, which keeps it perpetually cool, and the northern half on which the rains fall is covered with green.

The island is only twelve miles long by seven miles

wide. It consists of a great mass of rocks rising out of the ocean to a height of more than four thousand feet. It is made up of hills and mountains, with many ravines and short valleys. Most of the shores are inaccessible, but at Cumberland Bay there is an excellent landing place. Behind this is a settlement of cottages and huts made of cane wattled with straw. The houses have gardens about them, and at one time there was an attempt to start a stock-raising industry. One settler is said to have had as many as thirty thousand cattle and an equal number of sheep. In time, however, his business fell off and the cattle ran wild. The island now has wild sheep and wild goats, which thrive without human care. Excellent grass covers every open spot on the northern side of the island. There are wild oats and wild vegetables on some of the hills. There are wild fruits which have reproduced themselves from the trees planted by Alexander Selkirk, and from the same source there are wild grapes as delicious as those Crusoe dried for raisins.

The round trip to Crusoe's island from Valparaiso can be made in three or four days, and should include a look at the cave in which Alexander Selkirk lived, and the place where for four long years he scanned the sea for ships.

Alexander Selkirk, the hero of Defoe's story and the true Robinson Crusoe, was cast away more than two hundred years ago. There is a monument to him, consisting of a marble tablet set in the rocks on one of the higher parts of the island, which is known as Robinson Crusoe's Lookout. Here Selkirk is supposed to have kept watch-fires burning to attract the attention of any ship that might pass. The inscription reads as follows:

IN MEMORY OF
ALEXANDER SELKIRK, MARINER

A native of Largo, in the County of Fyfe, Scotland, who lived on this island, in complete solitude, four years and four months.

He was landed from the "Cinque Ports" galley, 96 tons, 18 guns, A. D. 1704, and was taken off in the "Duke" privateer, 12th of February 1709.

He died Lieutenant of H. M. S. "Weymouth" A. D. 1723, aged 47 years.

This tablet is erected near Selkirk's Lookout by Commodore Powell and the officers of H. M. S. "Topaz"
A. D. 1868

After his rescue, Selkirk went to London and there met Defoe, who had many talks with him, from which the latter got the idea and background of his story. "Robinson Crusoe," published ten years later, ran through four editions in as many months. It is still a best seller, ranking with the Bible and John Bunyan's "Pilgrim's Progress" as one of the greatest sellers of book history. "Robinson Crusoe" has been translated into nearly every known language. It has been printed in Spanish, German, Russian, Italian, Greek, and Arabic. It is one of the boys' books of Japan, and the Chinese edition has had an enormous sale.

Selkirk was found by a ship that had seen the fire on the Lookout. According to the narrative of the captain who took him to England, he was clad in goatskins and was running about as though crazy. When he reached London his talk was the wonder of the coffee houses. His adventures were the topic of all London. Sir Richard Steele told of them in one of his papers, and Selkirk published a little pamphlet of twelve pages describing his wanderings.

The Robinson Crusoe cave, where Selkirk lived, lies in a ridge of volcanic rock. It is about thirty feet deep, and

its roof is from ten to fifteen feet from the floor. The entrance is almost hidden in ferns. The cave, which shows signs of having been lived in, is like the description of that in "Robinson Crusoe." There are holes and pockets scooped out of the walls and here and there is a rusty nail driven in between the stones. The cavern is said to have been the resort of the buccaneers, who once ravaged the west coast of South America. There are other grottoes upon the island, as well as cave dungeons which were occupied when it was used as a prison camp for criminals. Some of the cells were far underground, and the prisoners could not stand upright in them. History records that the convicts once mutinied and murdered their guards. They captured the boats in the harbour, and three hundred of them made their way to the coast of Chile.

The Chilean government has made Juan Fernandez again a convict settlement and it now has what is considered a model prison. The island is also becoming noted as a fishing ground, fine cod being abundant in the surrounding waters, as well as lobsters and other shellfish.

## CHAPTER V

### YANKEE ENTERPRISE ON THE WEST COAST

And a vision appeared to Paul in the night; there stood a man of Macedonia, and prayed him saying: "Come over into Macedonia, and help us."

SUCH was the situation in Chile when the World War cut off its imports from Germany and greatly reduced those from other countries in Europe. As a modern Macedonia, it turned to Uncle Sam as St. Paul to supply its urgent needs. The result was a tremendous increase in the commerce between the two countries, with the United States not only leading in exports to Chile, but also the largest buyer of the products of the west coast republic. In the reaction after the war there was a great slump in trade, besides a renewal of keen selling by the Europeans, but Chile still offers a rich market for our goods, and one that increases in value with every year. The foreign commerce of South America bulks large in the markets of the world. That of Chile alone is worth half a billion dollars a year and more, and well deserves the attention of our manufacturers, banks, and shipping lines.

I once had an interview with Mrs. Hetty Green, the richest woman of the world, in which she told me that her mind refused to comprehend more than a million dollars at one time. It is the same with me. Let us subdivide the total and look at the separate items. Here are a few

Great steam shovels are eating away this Chilean mountain of iron, owned by the Bethlehem Steel Company and estimated to contain one hundred million tons of high grade ore, fifty years' supply for its mills in the States.

Beautiful glass-roofed arcades intersect the largest business blocks of Santiago. Protected from the weather, these pleasant passageways are popular waiting places, while the stores with which they are lined bring high rents.

selections from the wants of this country which show what the trade is and what are some openings for Uncle Sam.

Take our cotton and woollen mills. We have shipped in times past only a fractional part of the total amount of the textiles bought by Chile. But we must remember that this trade is highly specialized. The Chileans have their own styles and tastes, and are prepared to insist on taking only what suits them best, besides demanding the lowest prices and the long-time credits to which they have been accustomed in their dealings with Europe. They use all sorts of staple goods in cottons, woollens, and silks, but at the same time there are many specialties peculiar to the country. All the cotton lace is supplied by Europe; and Japan is the leader in selling handkerchiefs.

The trade for automobiles is rapidly opening up. Many of the older machines are of English, German, or French make, but they are being replaced by the cheaper American cars, which are to be seen in every large town on the continent. There are now more of our automobiles sold throughout South America than from all the European countries together. In all the big cities there is a fair and growing demand for motor trucks.

Our trade with Chile in manufactures of steel is an important item. The country uses thousands of tons of corrugated and galvanized iron a year, of which the United States before the war supplied but a small part. Many of our great combinations of capital have been planning to develop South American trade, and some of them are already taking advantage of the opportunities. The United States Steel Corporation has had its agents in every country of the west coast, and for years its ships

went to these ports by the Strait of Magellan. They now go by the Panama Canal and their return freights are such goods as have hitherto been carried by European steamers. For a time this company supplied more than half of all the steel Chile used. New buildings are largely of steel construction, and these and the railroads projected should be built with the products of our mills.

A volume could be written on the openings for railroad material, not only in Chile, but in almost every South American country. Chile is taking about a thousand tons of passenger and freight cars per annum; and she annually buys perhaps two thousand tons of locomotives and thousands of tons of rails, railroad spikes, fish plates, and car wheels. The sales of steel have been steadily growing and must increase many fold, for Chile has planned enormous railway extensions and her supplies should come from our country.

The Bethlehem Steel Company has done a great deal to build up American trade with the west coast of South America. In the first years of the World War the company put into service the fleet of steamers it had built to carry iron ore from its mines near Coquimbo, Chile, to its steel mills in the United States. These vessels can take cargoes of our goods on the return voyage whenever there is enough demand for ship tonnage to pay the company to do a general carrying business with its southbound steamers.

Electrical development is looming large and demands all sorts of machinery. For some time the country has bought on an average four hundred thousand pounds of electric bulbs a year, of which but a small proportion have come from the United States. Many of the big min-

ing companies use electricity to operate their plants. The Guggenheim copper works at Chuquicamata include in their electrical equipment a steam plant on the coast and a transmission line eighty miles long from there to the mines. Electricity is much used in the nitrate factories and there are great opportunities in supplies for the street car lines. These have been largely owned by Germans and most of the cars are of German construction, the only native thing about them being the women conductors. The development of Chile's waterpower resources will increase the use of electricity and stimulate the demand for all kinds of electrical goods.

This is a land of big things, and Americans are gradually getting hold of some of the most valuable properties, such as the iron mountain between Antofagasta and Valparaiso acquired by the Bethlehem Steel Company. The ore, which lies only five miles from the coast, is so situated that it can be loaded by gravity. This property is said to contain more than one hundred million tons of high-grade ore, which assays from sixty to seventy per cent. of pure iron. The mines are rich enough to supply the Bethlehem steel works for more than half a century.

I have previously spoken of Chile's wealth in copper. The Braden copper mines, which are about two hundred miles southeast of Valparaiso, were opened up by Americans, including William Braden, E. W. Nash, and others, and were sold later to the Guggenheims. Within a few years some fourteen million dollars were spent upon them and they are now potentially the largest in the world. They can produce about two million pounds of copper a month.

The Chile Exploration Company is the Guggenheim

subsidiary which is developing the Chuquicamata copper mines. These lie far north of the Braden property, about one hundred and fifty miles from Antofagasta by rail, at an altitude of ninety-five hundred feet. The ore body being developed is over eight thousand feet long, one thousand feet wide, and no one knows how deep. Diamond drills have been put down to a depth of eleven hundred feet and enough ore has been found to keep the plant running for two generations.

The plant at these mines is one of the finest in the world. It has great crushing machines, acid-proof tanks, and electrolytic equipment capable of treating more than three hundred thousand pounds of copper a day. The machinery has steam turbines and generators of ten thousand kilowatts. Twelve miles of standard-gauge railroad has been built, and some of the mining is done with steam shovels from Panama, by which the ore can be taken out at extremely low cost. This copper goes north through the Panama Canal and the ships are available for every kind of return freight.

The Bethlehem Steel Company mines and the Guggenheim copper mines require large forces of workmen and their management is of course American. At Chuquicamata and Braden American methods and conveniences have been introduced, and the American families connected with each property make steady demands for goods from the United States. The little city at Chuquicamata has a theatre, a hospital, two public schools, a public library, and music halls for the workmen. There is a Protestant and a Catholic church, and everything is being done with a view to a long future, for in taking out that enormous body of ore more earth will be moved than at

Panama. This work, which should last for generations, means a permanent American establishment in Chile.

Indeed, we seem to be coming into our own again in South America. Our people started the sister continent on its way to industrial development. The first steamship line along the west coast was founded by a Massachusetts Yankee, William Wheelwright, and it was he who began railroad building on the southern continent. He established the first gas plant and organized the first fire company. The feasible plan for a transcontinental railway from ocean to ocean was his, also, and he organized the Pacific Steam Navigation Company which later went into the hands of English capitalists, who have now the largest fleet on the west coast.

An imperative demand for all our South American trade is American ships, backed by the government, so that they cannot fail to pay a profit. Chile and Peru are likely to subsidize their lines of steamers and send them to our Atlantic ports by way of the Canal. Our government should do the same for American vessels engaged in South American trade. This trade was virtually monopolized by the English and the Germans before the war and our steamship companies could not compete with them. They gave such rebates to South American exporters that our vessels could not get the freights, and, besides, our laws for the protection of seamen make our ship-operating costs higher than on European vessels.

W. R. Grace and Company started a fleet of ships running between Chile and New York, as well as a line plying brisk trade along the west coast. This firm has branches in New York, San Francisco, Los Angeles, Seattle, and New Orleans, as well as in London, Manchester, and Birming-

ham. It has mapped the countries of the west coast of South America into selling districts as our wholesale houses divide their domestic territories, and has covered almost every part of Ecuador, Peru, Bolivia, and Chile with its branches, agencies, and salesmen. Grace and Company have long led in selling American machinery and in handling kerosene and illuminating oils, and also for many years have done a general business in imports and exports, selling everything from needles to steam dredges and from push carts to locomotives. The company soon grew famous for taking big contracts and its capital and business run high into the millions.

Our trade with Chile, as with other South American countries, has suffered greatly from the mistakes of our own people. The poor packing of American goods, for example, has been a cause of complaint for years. The Chilean importer naturally resents receiving and paying full price for articles which arrive in damaged condition due to boxes giving way under rough handling from ship to shore, or wooden barrels being used where metal drums were needed. Many of our salesmen and exporters have been too indifferent to the language and customs of the country, and too impatient to learn the peculiarities of the conditions to be met if the trade of the South American is to be won and retained. Many American manufacturers, eager to sell south of the Equator in times of surplus production at home, offended their South American customers by failing to provide for them when demand was strong in the States. However, each year a larger proportion of American business is making an intelligent effort to build up trade with the southern republics, and there can be no doubt of substantial progress being made.

## CHAPTER VI

### THE NERVE CENTRE OF THE NATION

SANTIAGO is the social, political, and business heart of Chile. It is the pulse of the nation and the people move as it beats fast or slow. It contains all of the statesmen and most of the wealth of the republic. It is the centre of all great movements. In fact, it might be called Chile itself. Its population is about half a million, or about one eighth of all the people of the country. It has grown in beauty and modern improvements. It has widened its streets and paved them with asphalt. The Alameda is a grand boulevard, with a garden through the centre and driveways on each side. The Cousino Park, the gift of the millionaire family that owns the great coal mines, is on one side of the city and a forest park on the other, skirting both banks of the Mapocho River. Santa Lucia, the table mountain rising straight up out of the city, is a creation more wonderful than the Hanging Gardens of Babylon.

I wish I could show you Santa Lucia. No city in the world has a public park to compare with it. If you could drop down into the very centre of Baltimore, Boston, or Philadelphia a mighty rock with precipitous walls three hundred feet high, with a base of one hundred acres or more, you might have an idea of the park as it was at its beginning. To make Santa Lucia what it is now, you

would have to cover the walls with vines, plants, and trees until the whole became one mass of green. You would have eucalyptus and palms, oak trees and pines, and semi-tropical plants and flowers of every description. The rock is so rough that natural grottoes are formed in its sides, with many fountains and waterfalls. Its paths are shaded by gigantic fern trees and shrubs of many varieties, even the names of which are unknown in North America. The visitor gets at every step upward a different view of the city. At the top, a little park at the height of a thirty-story office building, overhangs the city. In the centre of this park is a level space floored with tiles, where the city band plays in the evenings, and there on a curtain stretched across the rock is an open-air moving-picture show where the people sit out under the clear sky of the Andes with the doings of other parts of the world passing before them.

The view from Santa Lucia shows the magnificent location of Santiago. The town lies in a flat basin or valley surrounded by ragged blue mountains. It is seventeen hundred feet above the Pacific Ocean and in plain sight of the Andes. Around one side flows the Mapocho River, farther down is the Maipo, and beyond are the rich farms, orchards, and vineyards of the great central valley. Immediately below, and on all sides, is the city itself, a vast expanse of gray roofs cut here and there by wide streets crossing one another at right angles. In the centre is the Plaza de Armas, on which stand the cathedral, the city hall, and other great buildings. A little beyond, taking up a whole square, is the Chilean Capitol, one of the finest buildings in South America.

Look down with me as I take in this view. Right under

Church spires stand out sharply in the panorama of Santiago spread below Santa Lucia. The Catholic Church is a large landowner in Chile, having a hundred million dollars' worth of property in the capital alone.

No other city in the world has a park to compare with Santa Lucia, a table mountain rising straight up out of the city of Santiago, and beautiful as the Hanging Gardens of Babylon. This is one of the entrances.

In the Quinta Normal is the museum and exposition building of Santiago. This park, planted with a great variety of trees and shrubs, is one of the most beautiful in the city.

us begins the Alameda, the Pennsylvania Avenue or Commonwealth Avenue of Santiago. It is lined with magnificent structures. Scattered over the whole city we can see the spires of churches rising above the roofs. We also see trees apparently growing out of the houses. These trees are in the patios. Many of the houses are of Spanish style, being built around gardens filled with roses and palms and other tropical trees.

Let us go down from Santa Lucia and ride through the city. There are plenty of street cars in which we can have a seat on the roof; or we can get an automobile quite as cheaply as in any town in North America. We choose the motor car, and fly this way and that through the town. How big the houses are and how low! The older ones cover acres, and few of them have more than two stories. They are made of brick plastered with stucco and painted in the brightest colours. In the best parts of the city the architecture is Greek. The doors are upheld by pillars, and I venture there are more Corinthian and Doric columns in Santiago than in Athens. Other residences are like Italian palaces, and not a few have cost one hundred thousand dollars each, or even more. Nearly every great house has some legend connected with it. There is one splendid palace on the Alameda the plans for which were drawn in Paris and sent out here to the builders. In some way they got the plans mixed and put the back of the house to the street, and so it remains to this day.

Now we are in the business part of Santiago. There are many fine buildings; magnificent stores with the latest goods from abroad. The town is noted for elaborate window displays and its many arcades. The business blocks are large and the fact that they are not skyscrapers

makes it possible to cut these covered passageways through them, roofing them with glass. Often a block of several acres will be intersected by a number of arcades. Each is a favourite promenade, for the semi-transparent roof shuts out the heat of the sun and at the same time gives plenty of light. The stores in the arcades bring good rents. Early in this century there was no attempt at display. The prices were not marked on the goods, and nearly all dealing was a matter of bargain and sale. A revolution in merchandising was caused by the inauguration of a department store, a branch of a big Buenos Aires establishment. This store sold goods at fixed prices and had expert window dressers who varied the displays every night. The people were delighted, and forsook the old stores to such an extent that many of them failed, and the others were obliged to adopt the new methods. The business establishments of to-day are of several stories, which make a more regular skyline than that of an American city. They are more like the shops of Germany and France than those of the United States. Indeed, in many respects, the town is a miniature Paris.

The street scenes of Santiago are a combination of the old and the new. One still sees donkeys and mules carrying their panniers of vegetables and fruits from door to door. There are still horses close to the sidewalks hobbled by ropes around their front legs, and the ox-cart still creaks its way through the town. At the same time there are automobiles and cabs everywhere, and huge motor trucks carrying heavy merchandise and building materials.

The characteristic costumes of the past are disappearing before the changing styles of the present. You see Chilean fashionables in Paris bonnets and modern gowns, as well

as women and girls clad in black, with *mantos* or black shawls covering their heads, necks, and shoulders, so that only their faces show. This costume used to be common with both rich and poor, but now the well-to-do confine its use almost altogether to church-going. The laws of the Church allow no woman to come to a religious service wearing a bonnet. The only acceptable costume is dead black with a *manto* of black crepe drawn close around the face and fastened under the chin with a brooch, or it may be pinned at the back of the neck with a black pin. Some of the young women are now wearing black veils instead of these shawls, and not a few of them have their black dresses cut rather low in the neck. I have seen girls in *mantos* wearing light-coloured gowns and shoes of white kid, but this is not considered good taste.

The *manto* is sometimes used for shopping in the mornings, the better clothes being reserved for the promenade between five and seven in the afternoon, the hours when everyone's chief business is going along the streets to see and be seen. It has the great advantage of being quickly thrown on, and also of hiding any slovenly dressing beneath. I must say, however, that the Chileans are usually well dressed. The men of the wealthy class look as though they had just stepped out of bandboxes. There are up-to-date men's furnishing stores and dressmaking establishments with the latest European models. The people generally are as well groomed as those of similar classes in the United States, and the business and professional men are more particular in their dress than we are. The soldiers wear fine uniforms and the policemen have suits of white duck with white helmets.

Santiago is not a cheap city. It is a town of the very

rich and the very poor. Many of the citizens own large estates out in the country and live at the capital, where they have magnificent houses and entertain in grand style. The city has a municipal theatre subsidized by the government, which gives a season of Italian opera lasting for eighty nights. The companies are brought from Italy. Nearly every person of prominence has his own box which costs all of four or five hundred dollars in gold. At the opera full dress is always worn and the ladies are resplendent with diamonds. The men keep their heads uncovered during the singing, but as soon as the curtain goes down, every man puts on his hat. He may stand up in his seat and sweep the house with his opera glass, staring at such ladies as interest him. There is a great deal of visiting among friends in the boxes during the intermissions, and the opera is really more of a social than a musical occasion.

Important features of the social life of Santiago are the races, which are usually held on Sunday. Santiago has one of the finest race tracks to be found anywhere. It is outside the city on a plain surrounded by mountains which rise like walls of snow against the horizon. Above these white walls is a sky of the bluest blue, and in our winter, when the best races take place, the weather is as mild as June in Virginia. The ladies come out in their summer dresses and walk about through the parks and gardens near the grandstand. The race track is owned by the Club Hípico de Santiago. This club has done much to improve the breeding of horses in Chile, and has made them one of the best breeds in the world. The Chilean horse is a cross between the Flamand and the Arabian stock brought here by the Spanish conquerors. Under different

climatic conditions, it has grown into an entirely new type with great staying qualities and extraordinary courage and spirit. Like the Arabian horse, it eats but little, and it has all the endurance of the Arab and the strength of the Flamand.

A part of the race-track receipts and also those of the lottery are given to charity. The charities are under an organization known as the Junta de Beneficencia, which is one of the richest institutions of Chile. It gets its income not only from private charity, but also from its own properties and the funds donated by the state. It has ninety-seven boards of management, which direct one hundred and twenty-two charitable institutions. Here in Santiago it has a home for children that accommodates a thousand inmates, and an eating house that supplies meals at regular hours to poor mothers and children to the number of one thousand daily. It has orphan asylums, associations for providing cheap homes for working people, tuberculosis hospitals, and foundling asylums.

Under the care of the Junta de Beneficencia is the cemetery of Santiago, one of the most beautiful in existence. It was founded by General O'Higgins when he was president of the republic, about the time that John Quincy Adams was in the White House. Before that the Catholics had their own cemetery, and there was no place for the poor or for heretics. General O'Higgins believed that death "makes all men of one size," and he established this great burial ground.

The cemetery is an enormous inclosure filled with old cypress trees that extend for seventy-five to one hundred feet above the paved sidewalks and courts. The coffins are stored away above the ground in tombs of marble,

granite, or sandstone. One of the most beautiful memorials is the bronze figure of a woman standing on a pedestal with her arms outstretched toward heaven. This is to commemorate the two thousand women who perished in the fire that destroyed the Jesuit church. One of the men who did the most to save the women was the American minister, a man named Wilson. He received a testimonial from the city for his courage and is still gratefully remembered here. Another striking monument in this cemetery is a bronze figure of the Christ. It stands exactly in the centre of the city of the dead, with avenues radiating from the four sides of its rock pedestal. The rock represents Calvary. The figure is more than life size and is wonderfully impressive. It is the finest thing I have ever seen in any cemetery.

Santiago is a city of many churches and schools. Full religious liberty is granted and the Protestants have churches, missions, and schools in different parts of the republic, though Roman Catholicism is the state religion and the Church receives a large government subsidy. It owns in Santiago alone property to the amount of one hundred million dollars in gold. It has some of the best business blocks, and the whole of one side of the plaza belongs to it. It has acres of stores, thousands of rented houses, and vast haciendas or farms. The Carmelite nuns are said to be the richest body of women in South America, if not in the world. They have property in Santiago, and own many large estates scattered over the central valley. The Dominican friars also possess millions. Their church is the handsomest in Santiago, with an altar that is the most beautiful on this hemisphere.

During my stay here I have visited the National Li-

brary, the National Museum, and the Art Gallery, all of which are well worth seeing. The library has about five hundred thousand volumes and a special feature is a collection of native newspapers that goes back to the earliest days of the country. Among these are copies of the first paper published in South America, and also of the *Aurora*, the first paper issued in Chile. The latter is dated February 13, 1812, and, strange to say, its editors and printers were men from the United States.

The Chile of to-day has excellent newspapers. It has altogether about seven hundred papers and periodicals. There are a hundred different periodicals issued in Santiago, the chief of which is the *Mercurio*. This has editions for both the capital and Valparaiso and is published both morning and evening. The evening edition is printed on pink paper. There is a big Sunday issue including features similar to those of our metropolitan dailies. The paper has fine offices in Santiago, with a counting room that looks like the rotunda of a cathedral.

## CHAPTER VII

### HOW THE REPUBLIC IS GOVERNED

THE Chilean constitution is modelled upon that of the United States, but there are striking differences, in some of which Chile has the advantage. The president, for instance, is elected for a five-year term instead of four years, and he cannot succeed himself. He may have another term, however, if some other president intervenes. This takes him out of politics so far as abuse of the civil service is concerned.

A further point of difference is the conduct of the administration. The president of the United States is assisted by a cabinet of secretaries appointed by himself and confirmed by the Senate. The president of Chile appoints his own cabinet, but he has also a council of state of eleven members, five of whom are nominated by him and the other six chosen by Congress. This council has advisory functions and its approval is required for many of the executive acts and appointments. In case our president dies, the vice-president succeeds, and if he passes away, the secretary of state becomes president for the remainder of the term. Chile has no vice-president, but if the president dies the secretary of the interior acts as chief executive until a new president can be legally elected.

The president of the United States is far better paid than the president of Chile. Our chief executive has a

Chilean soldiers trained under German instructors guard the portals of the Moneda, the largest presidential residence on our hemisphere. It was built from plans really intended by Spain for Mexico City.

All Santiago is to be found at the track every Sunday during the racing season. The Chileans have developed one of the world's best horse breeds and most of the rich are enthusiastic turfmen.

Not only do members of the Chilean Congress serve without salaries, but senators are required to have an income of two thousand dollars a year, and representatives five hundred dollars a year, in order to be eligible to sit in the national chamber.

salary of seventy-five thousand dollars a year, and an allowance of twenty-five thousand dollars for travelling expenses. He has, besides, his house rent free and many perquisites. The head of the Chilean government gets a salary of about seven thousand dollars and in the neighbourhood of five thousand dollars for expenses. His total official income is not over twelve thousand dollars, but notwithstanding this he lives in good style and has a train of servants and a handsome limousine.

The Moneda, or Chilean White House, is much larger than our executive mansion. It covers almost four acres and is a three-story structure built around patios, or courts, filled with flowers and trees grouped about a fountain. The building is pretentious for a country the size of Chile, and, as the story goes, it was made so through a mistake. It was erected in the old Spanish times and the plans were drawn in Madrid and sent to Santiago. The Spanish architect had been told by the king to make two sets of drawings, one for a large building in Mexico City, then a part of the Spanish dominions, and the other for a smaller building in Chile. He followed these directions, but in the forwarding of the plans Santiago got the Mexican drawings and Mexico received those intended for Santiago. The result was this enormous Moneda, which is to-day the biggest presidential residence on this hemisphere.

Chile is one of the best-managed countries of all South America. The people are noted for their patriotism. They are for Chile, first, last, and all the time, and although they will fight each other during the presidential campaigns, they are peaceful enough once the president is elected. This country is not one of revolutions. As

Lord Bryce puts it: "Chile is the only country in South America which can boast to have had no revolution within the memory of any living man." Since the beginning of the republic in 1810 there have been twenty-seven presidents, and the only revolutionary period was between 1823 and 1830 when there were ten different executives. During the first years of the republic, several of the presidents had terms of ten years, and it was not until 1871 that the five-year period without reëlection was inaugurated. The president has the right of veto, but the congress can, by a two-thirds vote, override his objection and make a vetoed bill a law. When a presidential measure fails, it is the custom of the cabinet to resign, and there have been times when Chile has had a new cabinet on an average of once a month.

The congress of Chile differs from ours in its elections, its times of meeting, and in several other respects. The members of both senate and house are elected by the men of the country, but no one can vote unless he can read and write. There is a difference in the voting age according to whether a man is married or single. The bachelor has to wait until he is twenty-five, but the married man can vote at the age of twenty-one. Members of the house of deputies must be at least twenty-one at the time of their election, and senators must be thirty-six or more. All candidates for congress must have a specified income, and a member of the lower house cannot serve unless he has at least five hundred dollars a year. Every senator must have a minimum income of two thousand dollars a year, and members of both houses must serve without salaries. There is supposed to be no financial profit in the position, the place being one of honour alone. As to

graft, I have no doubt that it exists to a greater or lesser degree. Indeed, I have yet to find a legislative body anywhere on earth where each and all of the members are saints.

The educational qualification for suffrage and the requirement of a specified income make the government of Chile an oligarchy. The administration is confined to the richer classes, and the great families control the country. This is true of the Latin American republics generally. It has always been so in Mexico, and the supposition that the Mexicans can have free and fair elections under the present conditions is absurd to any one who knows Latin America. The government of these countries has always been in the hands of the few, and only by education and gradual uplift can the masses be fitted to take part in their administration.

The Chilean congress meets in winter, the sessions running from June first to September first. Chile, as you know, is south of the Equator, and therefore has its winter when we have our summer. In addition to the general meeting the president can call an extra session whenever he chooses, and during the recess a permanent committee of members of both houses presides over certain public business.

The Capitol is in the heart of the city. It is a two-story building of white stone, and the porticos, upheld by six Corinthian columns, form the entrance to the Chamber of Deputies and the Senate. The Capitol is surrounded by a garden filled with semi-tropical trees. There are palms as big around as a hogshead though not more than thirty feet high. There are beds of beautiful flowers. In one corner is a fountain and in another a statue on the

site of the Jesuit church which was burned while the congregation was at worship, resulting in the death of more than two thousand women. The doors of the church opened inward, and the panic-stricken people pressed against them, holding them shut and causing this enormous loss of life. The monument is a beautiful marble Madonna in the attitude of mourning, with four angels kneeling at her feet.

I passed this memorial on my way to the Chamber of Deputies. This chamber is entered by a lofty hall in the shape of a half moon and the galleries for visitors are reached by a marble staircase, which leads to a second and a third floor. Both of the chambers have the desks of the members running in rows back from the seat of the speaker. The desks are of mahogany and are more like school desks than those which we formerly had in our House of Representatives at Washington. This building has also rooms for the president and secretaries, and there is a great hall where the president reads his message to both houses in joint session.

The government of Chile has three branches: executive, consisting of the president and his cabinet; legislative, comprising the two houses of congress; and judicial, embracing the courts. The country is divided into provinces which correspond to our states, and departments that may be compared with our counties. The president appoints the governors of the provinces and the chief officers of the counties. They in turn appoint the officials under them, so that the president practically controls the civil service of the country. He also controls the courts, appointing the judges and their subordinates, with the approval of the council of state.

160°
140°
120°
100°
80°
60°
40°
75°
60°
40°
20°
ARCTIC OCEAN
GREENLAND
Baffin Bay
BAFFIN LAND
Bering Str.
ALASKA
Yukon R.
DOMINION OF CANADA
Hudson Bay
Juneau
VANCOUVER I.
NEWFOUNDLAND
Montreal
Ottawa
Boston
Chicago
Philadelphia
New York
UNITED STATES
ATLANTIC OCEAN
San Francisco
Washington
Mississippi
New Orleans
Rio Grande
Gulf of México
HAWAIIAN IS.
N.Y. TO PERNAMBUCO 1972 MI. 6 DAYS
N.Y. TO LA GUAIRA 1943 MI. 6 DAYS
N.Y. TO PARA
BOSTON TO PERNAMBUCO 1878 MI. 10 DAYS
WEST

The courts are like ours in some respects and different in others. A supreme court at the capital supervises all the other courts of the republic. There are six courts of appeal, one in each of the principal cities, and minor courts scattered over the country. There is no jury system except in cases where the freedom of the press has been abused. All trials are before one or more judges, the government being represented by public prosecutors. The police are under the control of the minister of the interior and seem to be well managed. Police expenses are paid out of the national treasury.

The Chileans are proud of their army. They are natural soldiers and it is said that they would rather fight than eat. According to the laws, every able-bodied citizen is required to serve in the army, and recruits are called up in their twentieth year and trained for one year. They afterwards serve off and on for nine years in the reserve. The country is divided into zones or military districts, each of which forms a complete division of mobilization. The country has good military schools and the army is said to be the most efficient in South America.

The government of Chile controls most of the railways, from which source it suffers a net loss of millions of pesos every year. The roads are badly managed and poorly equipped, and their officials and employees are a part of the political machine rather than efficient servants of the travelling public.

As I have said, a large part of the government receipts comes from the export duties on nitrate and the sale of nitrate properties. Another source of government income is the import duties. The tariff covers nearly everything, with the notable exception of printing paper, which is

admitted free on the ground that books and newspapers are a public benefit and should therefore receive state aid. All publications are distributed without postage and white paper sells for less than it does in the United States, notwithstanding that it has to be carried ten thousand miles or more to the markets.

One great difference between the government of Chile and ours lies in the matter of religion. We do not believe in any union of Church and State. The Roman Catholic religion is here maintained by the government, although according to the constitution all religions are respected and protected. The Catholic Church of Chile gets a certain amount of money every year from the government treasury and is one of the richest churches of the world. The great majority of the population is Catholic and the Chilean Catholics have always been noted for their power and wealth.

## CHAPTER VIII

### AMONG THE CHILENOS

MOST of the people in the Chilean cities live in what we should call two-family houses. The buildings are low on account of the earthquakes and many of them have only two floors. The first-story apartments command higher rents because it is easier to get out of them. There are no big apartment buildings. The highest houses have but four or five stories, and skyscrapers are yet to be built.

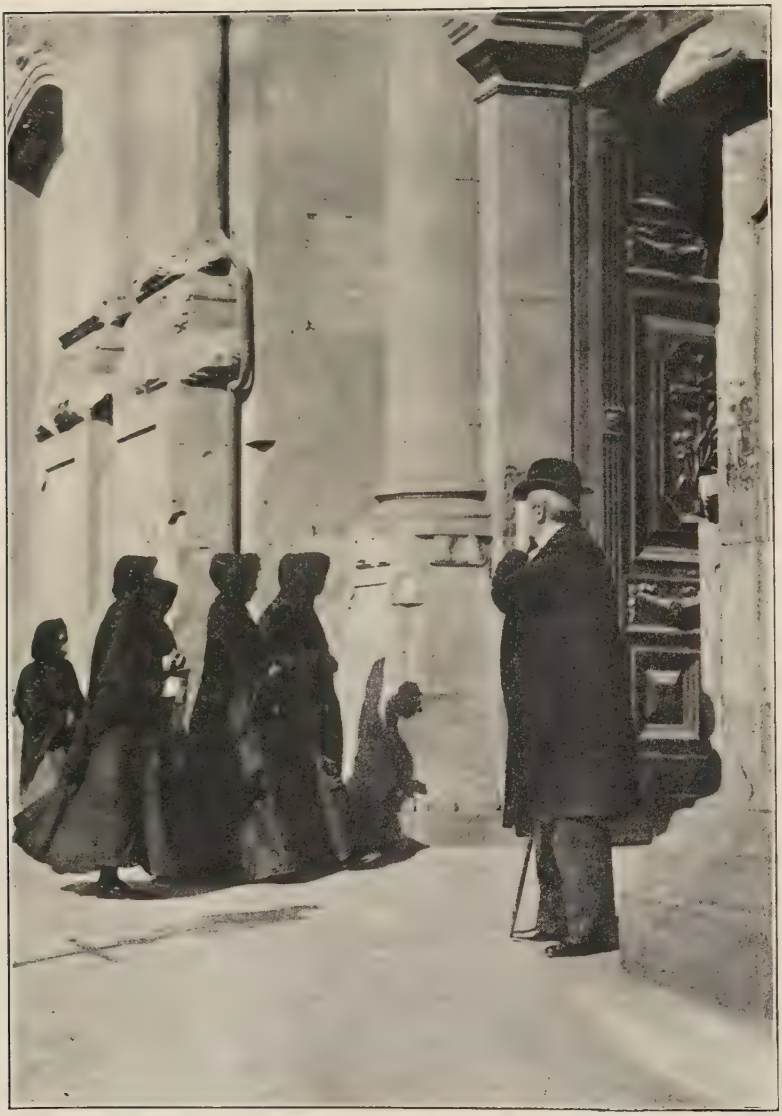
The very poor live in little tenements of one story, built in blocks. Each tenement has two rooms, one at the front and the other at the back. The only window is in the front. There are no heating or bathing arrangements and all water has to be brought in from outside. An apartment of this kind rents for from five to seven dollars a month, but if it is in a good location and of a little better construction it may bring fifteen or twenty dollars. Many such buildings are owned by rich Chilenos, who get nearly all their income from real estate. The capitalists like these small houses because the rent is always paid in advance and the interest on the investment is high. The church is one of the chief owners of real estate in Santiago. Its holdings include all kinds of property from tenements to palaces and from individual stores to great business blocks.

Though wages are rising in Chile, they are still far below those of the United States. Salaries of store clerks range from thirty to ninety dollars of our money. Bookkeepers get approximately sixty dollars a month, stenographers from forty to fifty dollars, though if they are foreigners they may receive as much as one hundred dollars. In this case they must be able to speak and write Spanish.

There is no chance here for poor young Americans who have neither special experience nor skill. If they are mechanical or mining engineers, or experts in farming or fruit raising, there may be openings; but of brains and muscle with no other capital the country has an ample supply of its own, available at wages which would not tempt the North American.

At present the native labour supply of Chile is largely increased by the employment of women. They are making their way into the government offices. In Santiago they are the clerks in the post offices, they act as cashiers in mercantile establishments, and they sell goods in the large department stores. The shop clerks are paid twenty dollars a month with a commission on their sales, which in some cases runs the salary up as high as one hundred dollars a month. The chief objection to such positions is that the young women who take them are likely to lose caste among their friends. Women have formerly been so secluded that the people have not yet become accustomed to their fighting the battle of life for themselves. When a girl goes to school she is usually accompanied by a servant or by her father or mother, and someone is sent to bring her home. The positions of secretary and cashier rank higher than those of clerks,

Bread is delivered from cloth or skin panniers to the homes of the poor. These are often one-story tenements without heat or water, yet exorbitant rents are frequently charged.



Women are forbidden to wear hats to divine worship in Chile, where the Catholic Church receives a subsidy from the government besides a large income from its extensive real estate holdings.

but the majority of the people look askance at the girl who works for a living.

I doubt whether the young business woman is as safe in Chile as she is in our country. The fact that she works at all subjects her to the danger of liberties on the part of the other sex. The white-slave traffic exists to a greater extent than in the United States. The social evil is licensed in the cities, where it is supposed to be under rigid inspection. The Spanish custom of preventing boys and girls from having anything to do with each other on a normal social level of purity and virtue drives the young men to the demi-monde, and defeats the ends it hopes to gain.

In order to understand the social conditions here it must be remembered that the country is one of classes and class distinctions. Chile has always had its aristocracy, its middle class, and its common people. The aristocrats are the descendants of the Spaniards and more especially of the patriots among them who freed Chile from the yoke of Spain. These men are the controlling influence in the country. They have the fat offices and own nearly all of the best property. Some have stock in the nitrate and other mines and not a few are interested in the various industries. Many of them are rich farmers and from among them come the heads of the universities and the chief doctors and lawyers. Most of the aristocrats are men of fine education. They are the progressive element of the republic. They are intensely patriotic and proud of Chile. They are not afraid to fight for their rights and will not submit to injustice either as individuals or as a nation.

The middle classes are merchants and small land holders.

Among them are many pure whites and many who have more or less Indian blood mixed with that which has come down from Spanish ancestry.

The lower class does the work of the country and its members are known as the Inquilinos, or erroneously as *rotos*. The word *roto* is one of contempt, conveying the idea of a drunken, good-for-nothing loafer, or a bad, quarrelsome character. This is not the nature of the Chilean peasant. He is a good, hard-working, honest man, as a rule, and anything but a loafer. He is a descendant of the peasant class of north Spain and the Araucanian Indians. He is intelligent, quick to learn anything that requires handiness and craft. He can do all kinds of work, and makes an excellent mechanic, farmer, or orchardist. He is hardy and vigorous, and noted for his endurance and patience. At the same time he is brave, very quick tempered, and ready to fight upon the slightest provocation. He seems to care nothing for life and very little for pain.

Indeed, the Inquilino will do all sorts of foolish things rather than be despised by his friends. The other day several peons were drinking together with a crowd of their fellows when one man charged another with being a coward.

"You think so?" was the reply. "Well, I will prove that I am not. Would a coward do this?" Thereupon he pulled out his knife and plunged it again and again into his abdomen before the admiring eyes of the crowd.

"I will show you that I also am not a coward," rejoined his accuser, and he began to stab himself. The two men would have killed themselves had not a young priest rushed in and torn the knives from their hands. These men were

drunk, but even so, no drunken man but a Chileno would think of proving his courage in such a way.

Drunkenness is the crying evil among the Chilean peasantry. The Inquilinos drink to excess in both city and country. Their chief aim seems to be to get drunk and the majority have a spree once every week. Monday is called the *roto's* holiday, for he is often so drunk on Sunday that he has to take Monday to recover. As one employer says, their liquor would kill an ordinary man at a thousand yards. The stuff is gulped down in large quantities, not because it is liked but to get a quick effect. There are many saloons; in Valparaiso there has been one saloon for every twenty-four men. In every Chilean village there are drinking places, and all the small-town and hacienda stores keep liquors for sale. Some timid movements toward temperance have been attempted, but little has been accomplished.

As a result of these excesses, of their poor food, and the unsanitary conditions of their houses, the mortality among the Inquilinos is great. They breed like Australian rabbits and their babies die like flies. Only the strong children survive; hence, perhaps, the peons as a class are as tough and strong as any people in the world. I have seen them carrying nitrate bags that weighed three hundred pounds each, and tossing them about like so many feathers. Four of them will lift a piano and carry it along the roadway, and in the mines a peon will carry all day long bags of ore weighing one hundred and fifty pounds up and down the notched sticks that serve as ladders.

The homes of the labourers are little better than pig sties. Some of the *haciendados* owning large estates have

erected model dwellings, but most of the tenant houses are still shanties of adobe brick, or huts made of reeds and sticks woven together and plastered with mud. They are thatched with straw. The doors are rude and the windows small. They have no floor but the ground; furniture consists of little more than a table covered with oilcloth, a few rough chairs, and a bed. If there is a bedstead it is merely a ledge of sticks built up from the earth and occasionally separated from the rest of the room by a curtain. They have large families, and a hut fifteen or twenty feet square is often the home of six or eight people.

The Inquilinos pay no rent for such houses and have in addition small tracts of ground for cultivation, as well as pasture for a certain number of cattle. In return they must provide labour for the proprietor whenever required and at wages often half the current rates of the neighbourhood. The *haciendado* has the right to discharge the Inquilino and the Inquilino in turn may leave when he pleases; but as a rule the masters try to hold their men and the men are not likely to move if at all well treated. On some of the farms there is a general store run by the landlord for his servants where the Inquilino makes nearly all of his purchases. I am told that the Inquilinos love their masters and I know that the masters are fond of the men who work for them.

The compulsory army service is having a civilizing influence on the lower classes. The Inquilino learns what it is to walk on a board floor and sleep in a good bed. The military system was modelled on that of Germany and education is combined with the training. German professors were brought over to teach in all the military academies and the cadets who aid in handling the troops are

usually well educated. The peasant is broadened by this service; he gets a taste for better food and does not like to go back to beans and toasted wheat. As a result, after leaving the army, many seek work in the cities. Being natural mechanics, they soon learn the various trades.

Another influence that is civilizing and elevating the Inquilino is the labour organization, which is slowly making its way into South American countries. The railway employees are organized, as are also the stevedores and the members of some of the trades. The labour element is beginning to take part in politics and it has representatives in the Chilean congress.

The state railways and the police department are under the civil service and these positions are in great demand among the common people, because the wages are high. The policemen receive about thirty dollars a month and one meal a day. They are under military training.

Much of the mercantile business of Chile is done by foreigners. The full-blooded Spaniard looks down upon trade and is content to have the half-breed and the man from outside do his merchandising for him. Big business is mainly in foreign hands, and some of the great fortunes of the country are held by families with European names. Among these the Fosters, the Walkers, and the Rogers are prominent. One of the leading patriots and heroes of Chile was named O'Higgins, another was Cochrane, and a third was Arturo Prat. The city of Valparaiso is largely European and its chief business establishments are English or German. There is a considerable admixture of English, Irish, and American blood in some of the best families of Santiago, while the southern part of the country has been developed mostly by Germans.

## CHAPTER IX

### BIG FARMS OF THE CENTRAL VALLEY

I AM in one of the garden spots of the globe—the central valley of Chile. Anything will grow here if it can only have water. As one of the *haciendados* said to me, "All that you have to do is to spit on the ground and drop in a seed, and presto, there is a tree!"

There is no place quite so fertile as that, but trees do grow three times as fast as in North America. I have seen groves of eucalyptus trees one hundred feet high that are only ten or fifteen years old. At Santa Inés the fields are walled with poplars as high as a church steeple. There are thousands of trees on that estate as large as any in the eastern part of our country and all of them have been planted within the last twenty-five years. It is the same with other vegetation. In the irrigated sections peach trees bear at one and two years and grains and grasses, including alfalfa, are wonderfully luxuriant. This is so notwithstanding the fact that some of the ground has been under cultivation for many generations. The lands about Santiago have been tilled for three hundred years and among them are numbered some of the finest farms of the world.

The central valley is a wide strip of lowland ranging in width from fifteen to a hundred miles and some seven hundred miles in length. Beginning above Santiago, it winds south through about one fourth the length of

Chile. To the east are the snowy walls of the Andes, with the mighty cone of a dead volcano rising here and and there above the other peaks. On the west are the lower mountains and hills of the coast range, their tops almost a desert, their foothills richly green. The valley is settled throughout. There are large towns along the state railroad, which runs through it from end to end, but most of the land is divided into great estates.

In the north these estates are all under irrigation, for only in the far south is the rainfall sufficient to dispense with artificial watering. Much of the country is slightly rolling, cut by creeks and little rivers fed by the Andean snows. Some of these streams carry down a great deal of silt, making fat the lands through which they flow. Others, such as the Biobio, are as clear as crystal from one year's end to the other.

Riding southward through this country, one finds the scenery far different from that of the richest parts of the Union. There are crops in sight all the way, but the fields are divided by rows of tall poplars or eucalyptus or by walls of mud and stone rather than by fences. Only along the railroad is there any barbed wire. The chief buildings are great rambling stuctures, the homes of the *haciendados* and the mean, mud-walled, thatch-roofed huts of the labourers. There are no barns standing out in the fields, and no elevators at the stations for storing the grain. There are plenty of cattle and horses, but very few stables or outbuildings. The weather is so mild that stock grazes out of doors the year round, all the way from Santiago to the Strait of Magellan. Therefore there are no haystacks or strawstacks. The grass and alfalfa cut are put up in bales and shipped to the cities, or to the

nitrate desert, where they bring higher prices. The climate of the central valley is about the same as that of Lower California, save that there is less rain, and in the upper part nearly everything has to be irrigated. Something more than two and a half million acres are already watered by artificial canals, and I am told that it is possible to put water on as many more.

Oxen everywhere take the place of horses and mules. They are yoked to clumsy carts by wooden bars tied to their horns and are driven with long goads with steel spikes in the ends.

These lands are farmed on a grand scale. In many parts of the valley two hundred acres is little more than a garden patch and irrigated holdings of five thousand and even ten thousand acres are common. There are some large vineyards. The estate of La Urmenta contains two thousand acres and of these two hundred bear grapes. Its cellars have a capacity of five hundred thousand gallons of wine, of which the owners bottle and ship vast quantities every year. The Errazuriz vineyard at the foot of the Andes puts up six thousand bottles of wine a day in addition to that which it stores in casks. It sells more than one hundred thousand bottles of wine every month. There is another vineyard that sends out four thousand gallons a year.

One of the richest families of Chile is that of Augustin Edwards, one time minister to the Court of St. James. He has one hacienda twenty-five miles north of Valparaiso that supplies a part of that city with milk. He has a fine dairy herd of eight hundred cows, and is noted as a breeder of horses, not only for racing but for heavy draft. In his stables he has seventy-five Arabian mares, eighty

Chile is a land of beautiful women who know how to dress in the height of fashion. The visitor regrets that they have largely abandoned the once universally worn manto, shown here, for the more conventional styles of Paris.

The haciendado, generally a descendant of the patriots who threw off the Spanish yoke, is a czar on his own broad acres, where his word is law to many Inquilino tenants and laborers.

Percherons, and one hundred and ten Shires. Another big dairy, which also supplies Valparaiso, is that of Don Thomas Eastman. On that place there are several thousand cattle, including one thousand milch cows. The Denoso dairy has still more. The latter estate has the biggest silo in the world and one of the queerest. It is nothing more than a great ditch three hundred and fifty feet long, twenty feet wide, and twelve feet in depth, filled with red clover which has been trodden to pieces by the hoofs of horses and then placed between layers of straw. The Denoso farm runs its machinery and lights its dairy with an electric plant operated by waterfalls two miles away.

During my last trip to Chile I visited the estate of Macul, which belongs to the Cousinos, the family of a woman long said to be the richest widow of the world. This huge place cost more than a half million dollars when it was bought by Don Cousino. It is now valued at over a million and consists of five thousand acres of irrigated land. The water rents amount to nearly as much as the salary of a United States senator. It has a large number of fine blooded horses, and two hundred cattle bred from the best Durham stock. Its vineyards have hundreds of thousands of vines, and produce millions of bottles of wine every year. Everything grows lavishly. Between the poplars lining the irrigation ditches I saw wild blackberry bushes thirty feet high.

Another great hacienda is that of Aguila, which contains eleven thousand acres and belongs to Don Santiago de Toro. It is not far from Santiago. At the time of my visit it had over two thousand cattle and two hundred horses, most of them used for breeding alone, and for the

family and guests. All of the farm work was done by oxen. Of the cattle, three hundred were dairy cows which produced six thousand dollars' worth of milk and eight thousand dollars' worth of butter a year.

The home of the owner is a series of long, low, one-story buildings around patios and gardens. They have roofs of red tile and the floors are of brick. They have wide porches and windows looking out on the gardens. The houses are in a grove of trees at least one hundred feet high, some of which are wonderful palms. When I visited the estate there were about two score guests besides the thirty children and grandchildren of the family of the owner. Each of these children had his own pony.

Other haciendas have beautiful buildings of modern construction, with great parks, miles of shady drives, and all the other surroundings of the millionaire's home in the States. Many of them are using modern machinery, and some are experimenting with fertilizers and intensive cultivation. Everywhere I go I see American ploughs, and there are three or four importing houses in Chile whose salesmen travel over the country introducing American harvesters, reapers, and windmills.

## CHAPTER X

### WINTER FRUITS FOR AMERICAN TABLES

BY WAY of the Panama Canal, Valparaiso is within nineteen days of New York, and a South American California full of summer products is almost at our doors. The fruit of Chile begins to ripen late in our fall, and plums, peaches, and pears are ready for the market in the midst of our winter. The prospect of a great exportation of Chilean fruits to the United States is agitating the farmers. The government is investigating the subject, and schools for teaching fruit growing, packing, and exportation are being established. Chile has long been the chief fruit-growing country of the lower half of our hemisphere. It already has hundreds of acres of orchards and its vineyards are yielding about fifty million gallons of wine every year.

In order to learn what this industry may offer to the United States, I have spent a day with Don Salvador Izquierdo going over his fruit and nursery plantations, situated near the town of Nos, about twelve miles from Santiago. Don Salvador is the fruit king of Chile and I might almost call him the Luther Burbank of our sister continent. He has an irrigated hacienda of about fourteen hundred acres, covered with gardens and orchards for raising flowers, plants, and trees of almost every variety. There are more than thirteen million different

individual plants on the estate, and he ships them by the tens of thousands to all parts of Chile, and across the Andes to Argentina, Uruguay, and Brazil. He is not only a grower of nursery stock but a scientific breeder of new varieties. He has introduced into Chile more than forty-eight hundred kinds of fruits and plants, and has developed by cross-breeding hundreds of valuable trees and flowers. He has already produced fourteen varieties of apples, not affected by the insect known as the *schizopera lanifera*, which is now destroying the apples of many parts of the world. The new varieties are grafted on the stalks of ordinary trees. The insect crawls up the stalk, but it stops where the grafts begin, and the trees and their fruit are found to be safe.

Among the other experiments of Señor Izquierdo is an elongation of the roots of the eucalyptus trees so that they can be grown on the dry lands at the top of the mountains. This is done by sprouting them in pots, where the young trees are fed with nitrate of soda and treated in such a way that their roots are about four times the usual size. Upon being planted, they go far down into the soil and tap the underground layers of water, and are therefore able to resist the drought. It was in recognition of this discovery that the Royal Agricultural Society of London unanimously elected Don Salvador a member of that body.

I cannot give you a better idea of the possibilities of fruit raising in Chile than by describing a trip with Don Salvador over his great fruit estate. We started at the station in Santiago and within an hour reached the little town of Nos. Our way lay through the central valley and we saw great farms and vineyards on both sides of the railway. At Nos we left the train and took the private

70°
60°
20°
30°
PERÚ
Tacna
Arica
Oruro
BOLIVIA
Potosí
Corumbá
Pto Esperanza
Pisagua
Iquique
Atocha
L. Ascotán
V. S. Pedro
Tocopilla
R. Loa
La Quiaca
Mejillones
Antofagasta
Paraguay
Paraná
BRAZIL
PARAGUAY
Pilcomayo
Salta
Bermejo
Asunción
Formosa
Iguazú
Taltal
Chañaral
Caldera
Copiapó
V. Copiapó
Tucumán
Santiago del Estero
Andagala
Catamarca
Corrientes
Posados
Uruguay
Salado
Paraná
Coquimbo
Mar Chiquita
Porto Alegre
L. Patos
San Juan
Córdoba
Santa Fé
Parana
Salto
Villa Maria
Melo
Rio Grande do Sul
Viña del Mar
Valparaiso
Mendoza
Rosario
URUGUAY
Santiago
Villa Mercedes
Pergamino
Buenos Aires
Rio de la Plata
Maldonado
Montevideo
Constitución
Talca
Telén
Azul
Concepción
ARGENTINA
Mar del Plata
OCEAN
JUAN FERNANDEZ IS.

car line for the hacienda, five miles away. The road is lined with poplars and passes great fields in which cattle are grazing. The estate lies on a plain at the foot of the mountains, sloping up toward them just enough to give the fall required for irrigation ditches. These are fed by a branch of the Mapocho River, a rushing stream so large and so swift that it not only irrigates the one thousand acres of nurseries but also furnishes electric current to run all the machinery. One of the canals turns a turbine that gives one hundred and twenty horse-power. This plant lights the hacienda and other buildings, runs sawmills and threshers, and operates the machinery of a large fruit-packing and canning establishment.

As we rode in we passed a threshing machine imported from America, and its noise carried me back to the farms at home. The grain was coming in from the fields in enormous ox-carts and was fed directly from the carts to the thresher. As the barley poured forth it was caught in buckets made of skin holding a bushel or more, and men carried them to a heap on the ground. Near by stood the sawmill where the men were making lumber out of trees not over twenty years old.

Around the large fields were rows of tall Lombardy poplars forming the fences of the estate. They made green walls of wonderful beauty. Frequently they were planted on each side of the irrigation ditches, making a double row of trees about an orchard or pasture. These tree-marked boundaries, which are customary throughout the central valley, add much to the beauty of the country. They change the face of the landscape and make it look like the farming regions of France. There must be tens of millions of these beautiful trees.

The estate is divided into sections, some devoted to grain, some to vegetable and fruit growing, and others to plant nurseries. Riding on the railway we passed rapidly from one immense tree-walled enclosure to another. It is impossible to describe all the different plantations, they were so numerous. Don Salvador said he had ninety thousand different species of trees. He sells half a million eucalyptus trees every year and receives orders for as many as forty thousand trees at one time. He has one plantation of citrus trees in various stages of cultivation with oranges, lemons, and grapefruit of every variety. He has long lines of poplars from South Carolina stock, and in a single nursery twenty thousand acacias. In one section we found a quarter of a million peach trees ready for sale and, in another, acres of apple trees ranging from mere sprouts to trees as high as our heads. There are one hundred and fifty thousand apple trees in this field twice as tall and as thrifty as those of the same age in nurseries of the United States.

Our next visit was to a plot containing one hundred and fifty thousand cypress trees. These had just been set out and were about as long as my finger. I picked up a bunch and counted them. There were thirty-one trees in my hands, each an evergreen that will soon be decorating some lawn of Argentina or Chile. These trees are raised under great tents of brush, or arbours with brush spread upon them. They made me think of the tobacco tents at home. Farther on I saw a plot of three hundred thousand plum trees, and farther still stretched broad fields of oranges, lemons, figs, and other semi-tropical fruits.

In the fields I saw ninety acres of vegetables ready for

gathering, a whole farm of ripe red tomatoes, long rows of green beans, and an enormous quantity of sweet corn. Among the fruits were peaches on forty-five thousand trees. They were of exquisite flavour and as big as my fist. Many varieties have been created by Don Salvador and in some of them he has succeeded in reducing the stones to half the size of those in our peaches.

The peach orchards average one hundred pounds of fruit to a tree, which would amount to four and a half million pounds of fruit. At five peaches to the pound this would make twenty-two and a half million peaches, and Don Salvador believes they could all be landed in New York in good condition if fast cold-storage steamers were available to take them via the Canal. He estimates that even after such a voyage his peaches would still be good for four or five days on the market.

Chile might supply almost unlimited quantities of fruit for our winter consumption. There are many big plantations and these people understand scientific fruit growing and can do business in the large. Don Salvador is perhaps the best among them, but there are many other orchardists who manage their farms almost as well and who would devote themselves to raising fruit for us, once the demand has been created.

We also visited the floral section of the estate and saw flowers of almost every known variety of the tropical and temperate zones. The great hothouses had in them thousands of orchids, and in one section were twenty thousand rose trees of more than fifteen hundred kinds. There were vast beds of lotuses and water lilies, and groves of persimmons which Don Salvador is introducing into Chile. He has forty varieties of this fruit brought

from Japan, Korea, and China, and he expects to make the Asiatic persimmon as popular here as it is in the United States.

He is also experimenting in the creation of dwarf plants and trees. He showed me a peach tree no higher than my knee, with ripe fruit, and a fig tree of the same size also in bearing. He is growing the famous dwarf pines of Japan and has some about a foot high that will grow no taller.

He is importing fruits and trees from all over the world at great cost. I saw forty new vines just unpacked and in excellent condition, but some other plants received at the same time and costing ten thousand dollars had all died on the way.

I visited the packing house where fruits and vegetables are put up by the ton. It has a capacity of ten thousand cans a day, and ships by the carload. There are huge cement warehouses equipped with the most modern machinery for drying, preserving, and canning, and great buildings filled with tin plates made by the steel companies of the United States. The cans are made in the factory by electric machines operated by Chileno men, women, and children. Peaches are peeled by a machine that does the work of one hundred and fifty women.

As we sat in Santa Inés, the big country house of the plantation, I asked Don Salvador to give me some idea of the possibilities of Chilean fruits for our own winter markets. He replied:

"There is no doubt that one of our chief industries of the future is to be raising fruit for the North. We shall finally be able to land fruit in New York in fourteen days from Valparaiso, and with the right kind of steamers we

The great central valley of Chile is one of the garden spots of the world. Poplar and eucalyptus trees, planted in rows to take the place of fences, grow quickly to great heights, while the crops of grain and grasses are luxuriant.

The Chilean peasant, or Inquilino, is of mixed Spanish and Indian blood. He is hardy, vigorous and a good worker, ready to fight on the slightest provocation, and likely to spend his week-ends in drinking.

Melons with a flavor equal to our Rocky Fords, and weighing seventeen pounds each, are commonplace in Chile; but only recently have they been available in our markets, where sometimes they bring six dollars apiece.

can send such varieties as will bring the highest prices at a time when there is no other fruit to compete with them. You get some winter fruits from Australia and Cape Colony but they are twenty-six days or more from New York, and you have to pay a freight several times as much as the freight from here. The difference in distance would be thousands of miles in our favour.

"Our fruit season is from November to May. We could furnish green almonds from December to June and ripe chestnuts in March and April. Green almonds are a delicacy you do not know in the United States but they bring enormous prices in France. We could supply you with peaches from December to April and ripe plums in January, February, and March. From March to August we can give you alligator pears, and papayas from March until June. There are ripe figs from December to April and apples in your early summer long before your own apples are ripe. We have also many fruits you do not know, for which I am sure a market might be created, such as nisperos, frutillas, lacunas, and chirimollas, all of which ripen in your winter. We shall also have oranges, lemons, and grapefruit for your summer consumption and watermelons and muskmelons for winter. The Chilean muskmelon is as big as a pumpkin and as delicious as a Rocky Ford canteloupe. We raise them in great quantities and could send shipments to New York in the heart of your winter. They would sell there for a dollar apiece or more, for they are so big that one would be enough for a dinner party of a dozen persons.

"We have plantations in bearing to start the business and we have so much soil adapted to growing these fruits that we could supply every American city. A single

acre will yield from ten to twenty thousand pounds of fruit and there are millions of acres yet to be planted."

Under the leadership of such men as Don Salvador, the Chilean growers have formed a coöperative organization for packing and exporting fruit similar to those of California and elsewhere in the United States. The government of Chile is lending its coöperation in developing markets in the United States, and considerable progress has been made. The practicability of shipping fruit from Chile has been demonstrated by the fact that California growers have found they could send their products to New York by steamer via the Panama Canal, a longer voyage than from Valparaiso to New York.

## CHAPTER XI

### CONCEPCIÓN AND THE LOTA MINES

OWING to the increasing demand for American goods, the port of Concepción will one day be as well known to our business men as Valparaiso is now. Concepción is the metropolis of southern Chile and the outlet of the best farming part of the country. It has railway connections north and south through the central valley, and extensions to the line crossing the Andes and Argentina to Buenos Aires. It already takes a large part of our exports to Chile; American farm machinery and tools of all kinds are for sale in its stores and are distributed from here through southern Chile and the farms of the great central valley. Not far from it are the extensive coal mines of Lota, and within a short street-car ride is Talcahuano, the chief naval station of the republic.

Concepción, surpassed in size only by Valparaiso and Santiago, is growing rapidly. The town lies on the Biobio River not far from the sea. A low range of hills separates it from the ocean. When it was first founded it lay right on the beach. Then came an earthquake that swallowed the city as the whale swallowed Jonah. Concepción disappeared into the maw of the Pacific. It was wiped out like Port Royal, Jamaica, and there is now only a bathing resort on that spot. In rebuilding, the people chose the present site, where the hills keep out

the waves, and in spite of the earthquakes the city still stands.

I say in spite of the earthquakes, for there are so many that the land shakes as though it had the ague. The quakes are almost as common as those of Japan. We had one last night that swayed the walls of my hotel room and set the electric lights swinging. The first shock awakened me. The experience made me think I was in a storm at sea. My bed rose and fell, and a bottle of ammonia on the edge of my washstand dropped to the floor with a crash, filling the room with its pungent odour. I looked at my watch. It was ten minutes after eleven. I rose and went out into the hall. The walls were still quivering, and as I entered the balcony looking down on the patio a smokestack fell. The guests of the hotel came running out in their night clothes, for fear that the heavy tiled roof of the building might cave in. Some of them stayed out of doors all night. I waited until the tremors ceased and then went back to bed. But I could not sleep for an hour or more for fear of the second shock which often follows a first. I finally dropped off and slept soundly until four o'clock, when the second quake came. It was quite severe but not so bad as the first. The dispatches of to-day show that these two earthquakes have been felt all over Chile. They have thrown down one small town, and created such consternation at the capital that many of its citizens spent the night in the streets.

I do not like earthquakes. There are regions where they have some kind of a shock every day; but even there the natives are afraid of them, and it is only the ignorant globe-trotting tenderfoot who says he does not fear them.

## CONCEPCION AND THE LOTA MINES

The most severe earthquake I ever experienced was in 1894 in the capital of Japan. At that time a great many houses were destroyed, the high chimney of the Parliament house crashed through the roof, and the American legation was almost split in twain. When the earthquake occurred, I was in the household department of the Mikado, having an interview with the high court chamberlain concerning the Empress, about whom I was to write an article. The structure was modern, similar to the public buildings of our own country. Had it been of Japanese architecture, it would probably have stood. We saw the walls moving and felt the floor rising and falling. The Japanese official said: "There is an earthquake, and I think we had better get out." The halls were filled with flying clerks. We rushed out and were barely clear of the building before half of it fell.

Nearly all the houses of Concepción are of one story on account of the earthquakes. The town covers a great deal of ground. It lies on a flat plain at the edge of a hill one thousand feet high, known as the Caracol. This is a public park and rises over the city almost like a fort. I climbed it to-day for the view. Walking through the wide streets lined with one- and two-story buildings, I crossed the Alameda and went up the winding slopes. The road was bordered with mighty pines, reminding me of the great cryptomeria avenue that leads up to Nikko, Japan. Mixed with the pines were mimosa trees in full bloom. The trees and many shrubs formed a wall of vegetation on one side of the road. When we came to the top, we were high above the city of Concepción and the valley of the Biobio. We could see the houses of Talcahuano, the naval station, and the ocean beyond. We could pick

out the river winding down to the sea, and the bridge across it, the longest and largest in Chile.

Concepción lay just below me, a great expanse of terra-cotta-roofed houses with a plaza of green in the centre. The big cathedral, with an audience room covering half an acre, loomed up on one side of the plaza. The wide streets radiating from the plaza are paved with asphalt and are clean and well kept. Looking down upon the houses I could see here and there a cluster of trees rising from the courts or patios around which they are built.

Toward the north there was nothing but wooded hills. I might have imagined myself in the midst of a wilderness but that the city lay at my back. Even from this distance the town showed signs of its sport-loving character. I could see the golf links, the polo-grounds, and the race-course with its track more than a mile long. The bands play in the plaza every evening and the people come out in their best clothes and walk about and look at each other.

During my stay at Concepción I have been investigating the opportunities for American coal by way of the Canal. The best coal mines of Chile are the Lota mines on Coronel Bay, not far from here. The coal veins are all around the bay and extend far out under the ocean. The seam is about five feet thick and the rock above it so compact that the water does not seep through. Indeed, the submarine tunnels are so clean that one could walk through them in immaculate evening clothes. The mines are equipped with modern machinery and lighted with electricity, and the coal is carried out on electric cars. It is a strange and picturesque adventure to ride on an electric coal train at a speed of twenty miles

an hour through a mile-long tunnel under the Pacific Ocean, while above one's head float the great steamships into which are shovelled the black diamonds loaded on the cars by sooty, half-naked miners.

The supply of coal furnished by the Lota mines does not begin to fill Chile's demands. The country uses more than twice as much coal as it produces, and imports a large part of its supply from Australia and England. The state railways use four hundred thousand tons per annum, and practically all of the smelting coal comes from Australia. I understand there are extensive deposits in the province of Arauco, south of Concepción, and that there is coal near Punta Arenas, at the Strait of Magellan. Petroleum and natural gas are known to exist five hundred miles south of Valparaiso, in a region not far from the steel works at Corral. The Panama Canal has meant that our coal from the Gulf and South Atlantic states has an increasing market here, and considerable coal forms the return freight in place of the nitrates and other minerals shipped to our country through the Canal.

It was the Lota mines that formed the foundation of the great Cousino fortune, still one of the largest of Chile. For several generations it had been known that coal existed not far from Concepción, and it was at the time when Madison was president that William Wheelwright tried to utilize these deposits for his ships. It was not until 1855, however, that they proved to be of any value, when they were bought by Don Matias Cousino.

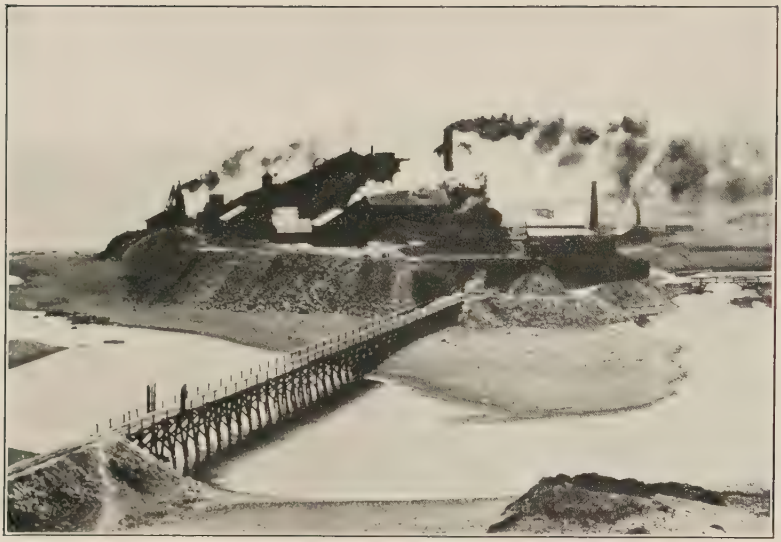
It is not a good steaming coal, but it does very well for smelting. Cousino established smelting works near the mines and began to develop the properties. In one year his net receipts were almost a million and a

quarter dollars. He established the town of Lota, which has twelve thousand people, including most of the six thousand men employed in the mines. It has good homes, a church, a hospital, free doctors, and a plaza for recreation.

When Don Cousino died, his widow's income was over one million dollars a year. She had not only the coal mines, but silver and copper mines, bonds and stocks. She had a large hacienda near Santiago and a fine home in that city. She gave to the public the Cousino Park, which is the chief pleasure ground of the Chilean capital, and her palace and park at Lota were also famous. Both places are wonders of landscape gardening, that at Lota being full of picturesque effects not only on land but on the sea.

Don Salvador Izquierdo (centre) is the fruit king of Chile and the Luther Burbank of South America, besides being a pioneer in opening markets in the Eastern United States for the products of the orchards of his country.

Chile's fruits are grown in the central valley, extending southward about seven hundred miles from above Santiago, and from fifteen to one hundred miles wide. When the orchards are in bloom it seems an earthly paradise lying just outside the gates of the city.



The Lota coal mines extend for more than a mile under the ocean. It is said that miners hear the clank of chains when ships drop anchor in Coronel Bay overhead.

Oxen with yokes fastened to their horns, are the chief draft animals of southern Chile. The two-wheeled cart is best adapted to the muddy roads of this region of abundant rainfall.

## CHAPTER XII

### THE STORY OF THE ARAUCANIANS

THE story of the Araucanian Indians is one of the thrilling romances of all South America. At Temuco, a lively young city of lower Chile four thousand miles south of Panama, I saw many of them on the streets, and from there went out to visit their reservations. I watched them working in their fields, went into their houses, talked to the men and women, and so can give a picture of the last of this race as they are to-day.

The stubborn resistance of the Araucanian Indians proved an impassable barrier to the ancient dominion of the Incas. Their lands marked the southernmost limit of the Incas' dominion. Later, for three generations, they waged a successful war against the Spanish invader, destroying his forts and besieging his cities. They killed Pedro Valdivia, the man who founded Santiago, and it was only inch by inch that his successors drove them toward the south. When they were finally overpowered by greater numbers, they refused to be the slaves and hirelings of the conquerors. They continued their fighting, off and on, and even to-day they maintain their own identity. They have their own farms, and lead their lives apart from the descendants of the white-skinned invaders who robbed them of the empire they once possessed. I say empire, for the Araucanians' domain

comprised the best part of the Chile of to-day. They had farms and raised crops of corn and potatoes, and in the far north they had llamas and alpacas which they got from the Incas.

The Araucanians of that day were much like our Indians of eastern North America. They did some farming but most of them lived by hunting and fishing. They were warlike and always ready to fight for their rights. The armies they raised to fight against the Spaniards were large. Valdivia was frequently attacked by thousands of Indians, and at one time a force of ten thousand Araucanians besieged Santiago. That was some fifty years after the discovery of America. The Spaniards had surrounded the city with palisades, but the Indians tore them down and set fire to the houses. The colonists would have been swept from the face of the earth in this region had it not been for Inés Suárez, a beautiful girl, who might be called the Joan of Arc of Chile. This girl was the mistress of the commander, Valdivia. In his absence she assumed the leadership of the troops. She put on a coat of mail, and, at the head of the little Spanish army, drove the savages back. During the siege she captured six of the Indian chiefs, and it is said that she cut off their heads with her own hands.

During the wars with the Araucanians, the Spaniards had much the same experience that our forefathers had in colonial days. The Indians surrounded the settlements and killed every white man they could get away from his fellows. They bottled up the invaders in Santiago, where they were reduced to eating rats and the roots of wild plants. The white men had their periods of famine like those of our colonists at Jamestown, and during

one of these, Valdivia, who was the Captain John Smith of Chile, wrote to Charles V of Spain that fifty grains of corn were a good day's ration and that all the corn was eaten, both meal and bran. Valdivia carried his fighting far south of Temuco. It was here that he was once attacked by forty thousand warriors, and saved himself only by charging the enemy with a company of cavalry. The natives were frightened by the horses, and in the battle a thousand were killed and four hundred taken prisoners. In former campaigns the Indians had tortured the whites, and Valdivia, in order to terrify them, ordered that the noses and right hands of the prisoners should be cut off. After that they were allowed to return to their tribes.

Fighting of this kind went on for years till at last Valdivia was captured and tortured to death. He was carried bound and naked through the woods to an Indian camp, and some writers say that the Araucanians poured molten gold down his throat.

The braves had their great chiefs in the persons of Lautaro and Caupolican, now honoured by statues in the Chilean capital. Gradually they were subdued by the Spaniards and their lands were taken from them just as we have taken the lands from our Indians. They are now settled upon reservations or upon farms which they are not permitted to sell. The parcels are not held in common, but are divided up among the families, so many acres to each person. A baby gets the same allotment as an old man of sixty. If one of the family dies, there is a new subdivision of the family tract and if the whole family disappears the lands revert to the government. Most of the holdings are patriarchal. The oldest male member

of the family controls the property, and when he dies another is selected to take his place. The people have a loose tribal relation and are ruled by their chiefs under the Chilean government. The race has been decimated by disease and drunkenness, and grows less year by year.

I have visited some of the Araucanian reservations. The land is rolling and looks not unlike parts of Ohio and Indiana. There is nothing to indicate that it is on another continent and more than a thousand miles south of the Equator. The soil is a rich loam, and I was surprised at the extent of the farms and crops. The farms are worked mainly by whites and half-breeds, who are hired by the Indians for a share of the harvest. On one Araucanian farm I saw a white man ploughing, and upon another an intelligent Chileno was threshing wheat. That Indian farmer had about two hundred acres in grain, which his sons were harvesting with the aid of white men. They used McCormick headers pushed along through the fields by oxen yoked to the machine by their horns. A white Chileno did the driving, and the Indians urged the oxen forward with their iron-tipped goads. The driver told me that he got a percentage of the crop for his work.

On the edge of this wheat field were a number of Indian huts. Every family had half-a-dozen dogs, which rushed at me when I came near. At the same time the women scolded and the men scowled as I took a photograph of some of the girls. The Araucanian houses are seldom more than fifteen feet square. Their walls are of boards and their ridge roofs of thatch. There are no windows and the light comes in through the rude door at the front. There are neither yards nor gardens about the houses, and

The dearest possessions of the sturdy Araucanian women are the heavy silver ornaments handed down from generation to generation. They are also vain of their braids of dark hair, though they pluck out their eyebrows.

Though they successfully resisted the armies of the Incas, and remained unconquered by force, the Araucanians are succumbing to the ravages of alcohol. Their cemeteries show signs of their ancient spirit worship, now giving way to Christianity.

no conveniences of any description. The only furniture is a bed of poles, or two or three beds in case the man has more than one wife, which is by no means uncommon. In one of the huts I found two fires going, and over each fire was a wife cooking for her own brood of children. The floor of the hut was Mother Earth littered with farming implements and clothing, saddles and harness. From the rafters hung ears of corn, strings of onions, and long strips of dried meat. The place looked like a junk shop.

The sleeping arrangements of this home consisted of two closet-like rooms partitioned off from the body of the hut by poles and skins. In each was a low platform covered with sheepskins. Each platform was the bed of one of the wives and her share of the children.

I was interested in the cooking. The fires were in holes in the ground inside the hut, and the smoke was so thick that it could be felt. It had so blackened the roof and the walls that when I took hold of a rafter my hand was covered with soot. The cooking utensils were iron pots resting on stones over the coals. Each pot held a stew of mutton cut up in small pieces and seasoned. The women were roasting potatoes and green corn in the ashes, and the smell was delicious. A great deal of red pepper is used. The Araucanians have a way of killing a sheep and peppering and salting its lungs while it is dying. They hang it up by its fore legs and stuff the windpipe with salt and pepper. While the animal gasps under this treatment, they cut the jugular vein, and a stream of blood is turned into the windpipe in such a way that it washes the salt and pepper into the lungs. Then the lungs are taken out and eaten raw, having thus been seasoned to

taste. At all meals the men are served first. The women act as waiters and eat what is left.

The Araucanians look much like the North American Indians. They are about the best type of the Red Men of this continent. Their features are much stronger than those of the Aymaras or Quichuas who live high up in the Andes. The young men are straight and well formed. The girls, when young, are plump and pretty. They age rapidly, however, and at forty they have as many wrinkles as a withered apple. The women have square faces with high cheekbones and low foreheads. They have copper complexions and jet-black hair, which is long, thick, and straight, and of which they are proud. They bind it up in two braids and wear it down their backs or tied around the crowns of their heads, so that the braids stand out like horns over their faces. They often decorate their plaits with silver beads and join the ends together by a string of silver balls.

The Araucanians are fond of ornaments and, as in many semi-savage countries, the jewellery of the woman is the savings bank of the family. The most common ornaments are of silver made into earrings and breastpins. Some of the earrings are of solid silver plates as large as a playing card; others are discs with earhooks attached. Now and then the women have silver chains around their necks, and others have their breasts decorated with silver beads. They have rings on their fingers and beads of silver sewed to the red cloth on their ankles. They wear their jewellery on all occasions. In one threshing group I have seen the bags were held by an Indian girl who wore a silver breastpin as big as my two hands; and another near by had on a coronet of silver coins. These girls wore

waists and short skirts and had bright-coloured blankets over their shoulders fastened with silver buckles in front. The Indian men delight in brilliant-hued ponchos.

Most of the Araucanians drink to excess. On my way to one of their reservations I drove past an old brave so full of liquor that he swayed this way and that on his pony. His wife rode on the same pony, perched up behind him. She was dressed in a flaming blanket and a red skirt, but her head was bare and her long black locks floated out in the breeze. Her feet, also, were bare, and I could see that it was only by pressing her heels tight against the flanks of the horse that she was able to keep on, holding the while to the waist of her drunken husband. The liquor they drink is almost pure alcohol and the women drink nearly as much as the men.

There is some Christian work going on among the Araucanians. The Catholics have one mission and the British and Canadian Protestants another. There are mission stations at Temuco, Quepe, and Cholchal, with churches, hospitals, and industrial schools. The missionaries have translated Genesis, The Acts, and a part of the Book of Revelation into the Araucanian language, and have reduced that language to writing.

These Indians have no literature, but they have traditions which have come down from generation to generation. Many of them hold to the superstitions of their forefathers, believing in the Great Father and in good and evil spirits. They think every man has a good spirit and an evil spirit always with him, and that the two keep up a constant fight for his soul. The evil spirit is even thought to follow him to his grave. For this reason a dead man is seldom buried at once, and when he is interred the

people make noises to frighten the evil spirit away. Their witch doctors are supposed to be able to ward off evil spirits and keep them from harming a man and his crops.

The witch doctor is always called in when an Indian grows sick, and the doctor's skill is credited with the cure if he recovers. If not, the doctor claims that the patient has been bewitched and may even point out the man or woman who has put the spell upon him. In the latter event the relatives of the deceased are likely to attack the person so accused. The Araucanian witch doctors are women selected when young by the older sorceresses and initiated with elaborate ceremonies.

All the possessions of this Araucanian family are included in the few objects before the door of their hut. They learned the art of weaving from their ancient enemies the Incas, having formerly worn only guanaco skins.

The government gives each family of foreign colonists free land and a yoke of oxen, but under present conditions Chile is hardly suited to the standards and ideals of the American pioneer farmer.

The first German colonists found Valdivia a mud village in the forest. They have made it a modern and thriving city, and have opened up for farming the wooded lands of the surrounding region.

## CHAPTER XIII

### SOUTH DEUTSCHLAND

THE southern part of Brazil is sometimes called West Deutschland. It consists of several states populated by Germans, with towns and cities governed by German-speaking officials. It has German newspapers, German signs over the stores, German factories and breweries, and nearly all business is in German hands.

Another great German settlement, the one in lower Chile, might be called South Deutschland. It is far south of Valparaiso and within a short distance of the Strait of Magellan. These notes are written at Valdivia, in this section. The Germans began to come here in 1850 and so many immigrated that some of the towns became more German than Spanish. The first settlers were from Hamburg. They numbered seventy men, ten women, and five children. That colony was followed by others, and by the close of our Civil War there were more than fourteen hundred Germans settled here. They were true pioneers, who chopped down the forests, built log cabins, and planted wheat fields and orchards in their clearings. They opened up a large part of the region, and made many fine farms. Being thriftier than the ordinary Chilenos, many became rich.

They have built great sawmills, and ship lumber to all parts of Chile. They raise wheat, potatoes, and apples,

and not a few are engaged in merchandising. Owing to their enterprise, the region has become one of the richest and most prosperous parts of the republic. Large towns have grown up, like Puerto Montt and Valdivia. The latter, which has a population of twenty-five thousand, is the metropolis of this part of Chile. Lying five hundred miles south of Santiago, in the heart of the forest, it is surrounded by new farms and clearings. Its port is the principal one of south Chile and machinery of all kinds, especially agricultural implements, are landed here in great quantities. Valdivia had a fire some years ago which swept away its houses of wood and tin, and in their places we find a new city set up along modern lines and up to date in every particular. Many of the buildings are of reinforced concrete and two and three stories high. The shops have plate-glass windows coming down to the pavements, and the window displays are better than those of our towns of the same size at home. The streets are wide and the pavements twice as broad as those of Santiago. The whole town is white, and the concrete construction makes it look like a substantial municipality built of sandstone.

The city is more German than Chilean. The shop signs are German, and there are cafés in which you get excellent beer made by the Germans. This beer, famous throughout the republic, is shipped north and south along the coast. The principal hotel has a French name, but it is run by a German, and the Germans own the greater part of the town. One of the leading exceptions is the importing house established by W. R. Grace and Company, which has a pretentious two-story building covering the whole of one side of the plaza. This store is

filled with American machinery, from windmills, reapers, and threshers to hand sewing-machines and notions. There are also American canned goods and textiles.

When I arrived in Valdivia at night, I expected to find everything closed as tight as a drum, as is the custom in nearly every Spanish-American city along the west coast. In Lima, the capital of Peru, with a population of one hundred and fifty thousand, by seven o'clock the streets are deserted, the stores are closed, and the traveller walks between blank walls. In Santiago, which is double the size of Lima, the merchants go to bed with the chickens. But Valdivia is alive after dark, and on Saturdays the stores are open until late in the evening. The city is lighted by electricity, and crowds walk the streets and promenade back and forth in the plaza.

Valdivia is on the Calle Calle River, which flows from the Andes down to the Pacific. The town is about twelve miles from the mouth of the river, where lies the port of Corral. All goods are landed at Corral, and carried up to Valdivia in barges. I took a steam launch and rode down to look at the port. The stream is about as wide as the Potomac at Washington. We first sailed by lumber yards, boat-building works, sawmills, and other wood-working establishments. A little later we wound our way among low hills covered with woods, passing through a maze of fine scenery. The water is of an emerald hue, and flows between dark green banks and low hills as precipitous as those of the Rhine between Mainz and Cologne. Had the hills been covered with vineyards we might have imagined ourselves on the Rhine, there were so many Germans on board our boat.

The port of Corral has only a few hundred people. Its

buildings are small, the wharves are poor, and much of the unloading is done out in the harbour. We saw two steamers at anchor and on our way to the port we passed barges carrying coal and machinery up the river. Only small vessels call here, and since the railroad has been completed a large part of the freight is carried by rail.

Southern Chile, with its abundant rainfall and rich farming lands, is just the opposite of the north. It is a land of forests rather than desert, and it is almost as well timbered as was the eastern part of the United States when our first settlers came. There is so much wood here that Chile, notwithstanding the arid lands of the north, is said to have in proportion to its area more forests than any other country of the world. I rode through green fields with stumps scattered through them, all the way from Concepción to Temuco. Farther south, men were cutting farms out of the woods, and here and there the wheat was growing among the burned timber, some of which was still standing. Here was a forest where the trees had been stripped of their bark close to the ground, and yonder one full of skeleton trees killed in that way. In the latter case the bark had dropped off and the trunks and branches were white as bleached bones.

At nearly every railroad station are lumber yards piled with fence posts, ties, and building materials awaiting shipment to the north. The lumber is not good in comparison with ours. It is full of knots and cracks. The boards are narrow, and nothing like the fine-grained wood which comes to Chile from California, Oregon, and Washington. Most of the trees here are Antarctic beech and pine. There are also hard woods. The forests are thin

and there is much underbrush, but it is impossible to clear the land as we do, because it is so troublesome to get rid of the stumps. Some of the farmers are now importing stump pullers from the United States, while not a few are using dynamite. Ringing and burning the trees leaves a great deal of dead timber, and no good cultivation can be done until the dead trees are out by the roots.

After the land is cleared it is not at all like similar tracts in the United States. The fences are of barbed wire, but there are no large fields in clean cultivation and no fine barns and houses as in our country. The buildings are generally log cabins of one story roofed with straw or slabs. They are put up in a rude way, and but a few of them have gardens or flowers. There are some good homes owned by the Germans, but the native Chilenos live little better than savages. They seem to be camping out rather than settling down to build up a country.

Much of the new acreage is devoted to wheat. This is the chief cereal of Chile, the country producing something like nine million bushels per year. Some cattle are raised, but here in the south the animals are ragged and lean, and their meat is used chiefly for making *charque*, or dried beef. In the central valley the animals are much better, and here and there you find Herefords and Durhams.

The heavy work of the farms, both in north and south Chile, is done by oxen, the team being increased according to the labour. A half-dozen yokes of oxen may be used in hauling out timber, and it takes a long team to drag the wheat carts over the mud roads to the stations. The oxen are yoked by the horns, and push rather than pull. The yoke is fastened to the tongue of the cart, and by pushing against the yoke, the oxen force the cart onward.

The animals in front of the first yoke, which pushes the tongue, have ropes reaching from their yokes to the cart. This method of working seems cruel, although the natives claim that it is not. When yoked up, the oxen cannot move their heads from side to side. They are driven with long goads, tipped with sharp spikes, which are often so mercilessly used that the blood flows.

Farm cultivation is now done largely with American machinery. The wire for fencing is furnished by our steel mills, and there is scarcely a farm that is not using tools imported from the United States.

At the same time the old methods persist side by side with the new. Much of the grain is still threshed out by mares on threshing floors. In this process the ground is pounded hard and the sheaves of wheat are cut open and spread over it. Then a drove of mares is driven around and around to tread out the grain. The winnowing is done by throwing the straw into the air, and the bagging is by hand. Adjoining a farm where these methods are seen you may find an American thresher, and the wheat may be cut, threshed, and bagged in the fields.

Chile has no elevator system. After threshing, all grain is taken at once to the railroad and shipped. It is put up in sacks of two hundred pounds and loaded on flat cars. There are few warehouses and at some of the stations the grain is piled in sacks in the open and covered with canvas.

A word of advice to such Americans as are thinking of coming to Pacific South America to settle: It seems to me that the opportunities are poor and that we can all do much better at home. The government would like

colonists, and, on the frontiers, free land may be had. Here in Chile the limit is one hundred and twenty-three acres for each head of a family and seventy-four acres for each son who is of age. Contracts are often made with foreign colonists by which their steamship passages from Europe are advanced, and free railroad transportation is given to the place of settlement. In some cases the government gives each family a yoke of oxen, one hundred and fifty boards for the building of a hut, and something like fifty pounds of nails for fastening the boards into place. This is on condition that the colonist establish himself at once on the land given him, and work it steadily for at least six years. He must contract to pay back, without interest, the amount of passage money received, and not to sell anything he gets from the state, nor to mortgage the property or dispose of it until after the six years have passed. Such regulations seem attractive, but coming to a strange land, where the language is not understood and the customs are at variance with those of our country, is liable to prove disappointing. And so I say: DON'T.

## CHAPTER XIV

### THE RAILROAD BACKBONE OF CHILE

FOR two weeks I have been riding over the state railways, as a guest of the government, and have gone here and there at my will. The place where I am now writing is the southern terminus of the system. It is Puerto Montt, a thriving port on the very frontier of the settled portion of Chile, and as far south from Pisagua, where the railroad begins, as the distance from Boston to Dallas, or from New York to Denver.

Our exporters will find it profitable to consider the railway system of Chile. This will develop into a long line of railroad running from Peru to the Strait of Magellan, with feeders going west to the coast and east to the mountains. This line, which is known as the Longitudinal System, will eventually connect Peru and Punta Arenas, the metropolis of the Strait and the southernmost town in the world. The railway now extends almost to the Peruvian boundary, traversing the nitrate fields and connecting them with Valparaiso and Santiago.

The first part of the road goes through the desert southward almost to the latitude of Valparaiso, where the Longitudinal System crosses the Transandine Railway to Buenos Aires. Then begins the great fertile central valley which I have just left behind. Below that the road enters the forest region, which extends to and

Southern Chile, with its abundant rainfall, thick forests, and rich farms, is in pleasant contrast with the deserts of the north. Rows of fast growing poplars along the roads are a characteristic feature of the landscapes.

Most of the steepest grades on the Transandine Railway are on the Chilean side. Corkscrew tunnels like those of the Gothard route were too expensive, so the height is conquered by a rack and pinion system.

beyond this part. The central valley section has been built a long time and, when I first visited Chile, pioneers were beginning to penetrate into the forest region. I then came on construction trains as far as Temuco, the home of the Araucanian Indians, and I am now a day's ride farther south, having gone through pioneer settlements all the way. Long before the middle of the century the rails will probably have been extended to the Strait of Magellan, which is about as far south from here as from St. Louis to New Orleans.

The Longitudinal Railway belongs to the government, which is furnishing the capital for the extensions. At the present time Chile has over five thousand miles of railroad in operation, of which about one half is state-owned. The republic began to take over the roads about a generation ago, and it has paid out several millions of dollars for them. The lines are managed by officials appointed by the president. There is a general manager assisted by nine administrators, each of whom holds a position similar to that of general manager of a private railroad. The chief offices are at Santiago, and there is close connection with the government as to all appointments. Every man who gets more than a thousand dollars a year receives his appointment directly from the president, while the others are selected by the general manager with the advice of his subordinates. This makes every railroad position a government job, and all appointments from administrator to the brakeman and track layer are more or less affected by "pull." I have talked with many people concerning the service. So far, I have yet to meet an unprejudiced observer who believes that government ownership is good for the roads or the people. Indeed,

the railway question is one of the live issues of public discussion, and the figures show that most of the lines are run at a loss of several millions of dollars annually.

The difference between the receipts and the expenditures does not reveal the whole deficit arising from government management. There has been an enormous additional loss in the wear and tear on the roads and rolling stock, owing to carelessness and waste, but in 1914 an act was passed appropriating more than twenty million dollars to re-equip and reorganize the system. A considerable amount of this went into new cars, and large orders were placed in the United States.

The rates of travel on the state railways are low for a country like this. First-class fares are about two cents a mile; second-class, one and one third cents; and third-class, less than two thirds of a cent a mile. There are additional charges of fifty per cent. on the express trains and of about one hundred per cent. on the *rapidos* and trains de luxe. There is a reduction of ten per cent. on return tickets of all classes. The freight rates are high and more than half of the earnings come from freight. The extra rates for baggage are much above those in the United States, and on the central system four per cent. of the total earnings comes from luggage charges.

Chile has railways owned by private companies in addition to the government roads. Their trackage is almost as great as that of the national system, and their total capitalization is quite as large. Their freight and passenger rates are higher, but the service is better. Many of them are run in connection with mines and other interests, and the returns do not show the actual receipts or profits.

For instance, the nitrate railways, of which there are seven, run from the ports out into the desert and carry little but nitrate of soda. They range in length from fifty to three or four hundred miles and their business is in proportion to the output of the nitrate factories, or *oficinas*, which they serve. The Pisagua railroad between Pisagua and Iquique has a length of three hundred and fifty miles and a capitalization of ten million dollars. It paid over seven per cent. on its common stock for a number of years, and its net receipts are still large. That road is owned in England.

The Anglo-Chilean nitrate road, running from the port of Tocopilla to several different *oficinas*, is another profitable line. Its length is seventy-odd miles, it is capitalized at five millions of dollars, and in one year its dividend was fifteen per cent. The road from Mejillones that connects with the Antofagasta Railway to Bolivia is about eighty miles long, with a thirty-inch gauge. It carries the copper of the Guggenheim syndicate mines down to the coast and must have an enormous profit therefrom. The Taltal Railway Company, which runs a line from the southern nitrate fields to the port of Taltal on the Pacific, paid dividends of nine per cent. some years ago. All of these railroads are feeders of the Longitudinal System, which has been built to connect them as well as to give a line north and south throughout the republic.

A most interesting feature of the Chilean railway situation is the number of lines planned to cross the continent over the Andes and connect up with the Argentine railway systems. One of those already built extends from Valparaiso to Buenos Aires. This is about the distance between New York and Chicago. It crosses the Andes at

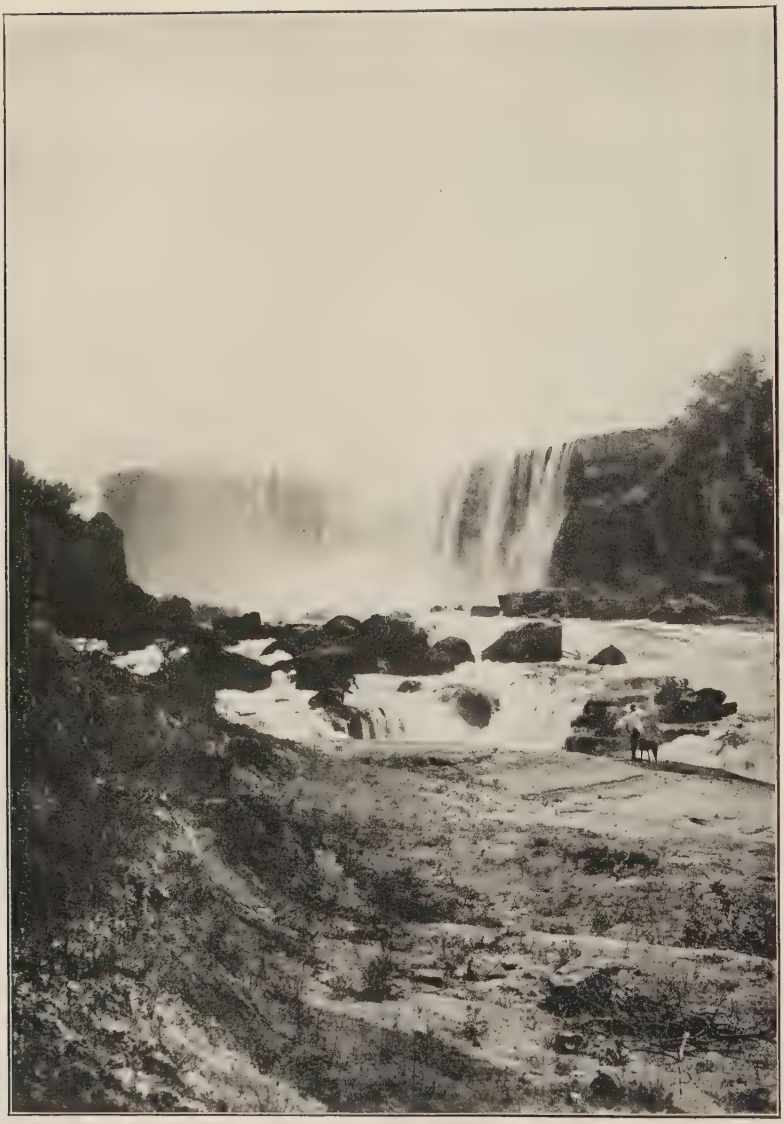
an altitude of ten thousand five hundred feet through a tunnel nearly two miles long. It was expensive to build and is so costly to operate that its freight rates will always be high. It has a rack-and-pinion or cog system of about twenty-five miles, and the gauges differ so that freight has to be transferred twice during the journey across the continent.

Another transcontinental line, nearly completed, will connect the port of Antofagasta with Buenos Aires. This is an extension of a branch of the Antofagasta–Bolivia railway. I have described my journey over it from Bolivia to the sea. The transcontinental extension leaves the main line at Uyuni, where it has an altitude of twelve thousand six hundred feet, and thence passes through a rich mineral district, crossing Bolivia to the frontier at La Quiaca, where it connects with Argentine lines. This will never be a general passenger line across South America. The distance is too great. It will, however, be a short cut from the Pacific Ocean to the Atlantic.

Chile has plans and surveys for several important transcontinental railways south of the present line from Valparaiso to Buenos Aires. Some of them will end at Bahía Blanca, the Argentine port on the Atlantic Ocean, a day's ride south of Buenos Aires, and one will connect Talcahuano, the great commercial and naval station near Concepción, with Antuco, and thence go on into the Argentine, there to meet the roads having their termini in Bahía Blanca. This Transandine road would be about two hundred miles shorter than the road now in operation between Valparaiso and Buenos Aires via Juncal. It will be easier to build, and will cross the Andes through a tunnel less than a mile long. The government has

Seven of the railroads of Chile were built to carry nitrate from the mines in the desert down to the sea, and earn good dividends on this traffic alone. They also serve as feeders to the government Longitudinal System.

The difficulties of railroad construction in Chile are obvious. That it was the first South American country to build steam roads was partly due to the energy and skill of an American citizen, William Wheelwright, who linked the capital to Valparaiso.



Projects for electrification of Chile's railroads give special importance to sources of water power such as the famous Falls of Laja in Concepción province, estimated to be capable of furnishing one million horsepower.

granted a subsidy of one million dollars, to be paid at the rate of five thousand dollars per kilometer, as it is opened to traffic, until six hundred thousand dollars has been paid. The remaining four hundred thousand dollars will be held until the line has been joined to the Argentine system. Another road to Bahía Blanca via Donquimai has been decided upon and will have a length of eight hundred and fifty miles.

Between these southern transcontinental roads and the Transandine road now in use several routes to Buenos Aires are being considered and surveyed. One of these from Valparaiso via Maipo is about one thousand miles long. Another from the port of San Antonio to Buenos Aires is a trifle over a thousand miles in length. In addition to these there are three others planned to go through the Colorado route, which would connect them with the port of Constitución. Each of these routes is about a thousand miles long.

One reason for Chile's desire for more transcontinental lines is the fear that use of the Panama Canal will reduce the shipping through the Strait of Magellan. Many of the ships that have come by way of the Strait now go through the Canal and down the west coast of Chile, and the country will have much less commerce by the Strait than it had formerly. The new railroads, however, would effect close connection with the Argentine, and tend to route future travel to Europe by way of Argentine ports instead of northward via Panama.

Chile was the first country of South America to build railways and, as I have said, they were constructed by United States citizens. The first road on the continent was made to connect the silver mines of Copiapó with the

port of Caldera and was built by William Wheelwright. This line was opened July 4, 1851. The first locomotive used is now shown in one of the Chilean museums. It was made by Norris Brothers in Philadelphia in 1850. Wheelwright began the railroad from Valparaiso to Santiago, and made surveys over the Andes with the idea of a transcontinental route. His first road was built four years before Henry Meiggs, another great American constructor, began work on the Central Railroad southward from Santiago.

William Wheelwright's name is highly honoured in Chile. He did the country great service in aiding her early development. He was born at Newburyport, Massachusetts, and at the age of twenty-six was made United States consul at Valparaiso, where he established a line of passenger vessels along the coast.

Henry Meiggs built the wonderful road that goes up the Andes back of Lima. He also constructed the line from Mollendo to Arequipa, which now goes on to Lake Titicaca, and he did much railroad building in Chile. He completed the railway from Valparaiso to Santiago and built some portion of what is now included in the Longitudinal System.

From Puerto Montt I shall travel northward back to Santiago, where I shall take the Transandine line for Argentina. But before I leave this part of the world I want to tell you of the trip through the Strait of Magellan to Tierra del Fuego and to the Falkland Islands, which I made when I was last in the southern hemisphere. Fewer and fewer travellers are now taking this route. What they save in time they lose in other ways, as I found these lands full of interest, while the voyage through the famous

Smyth's Channel, not often attempted nowadays, gave me sights and thrills not equalled in my travels anywhere else in the world. I give you my notes as I penned them during that journey, modifying them only where changed conditions demand.

## CHAPTER XV

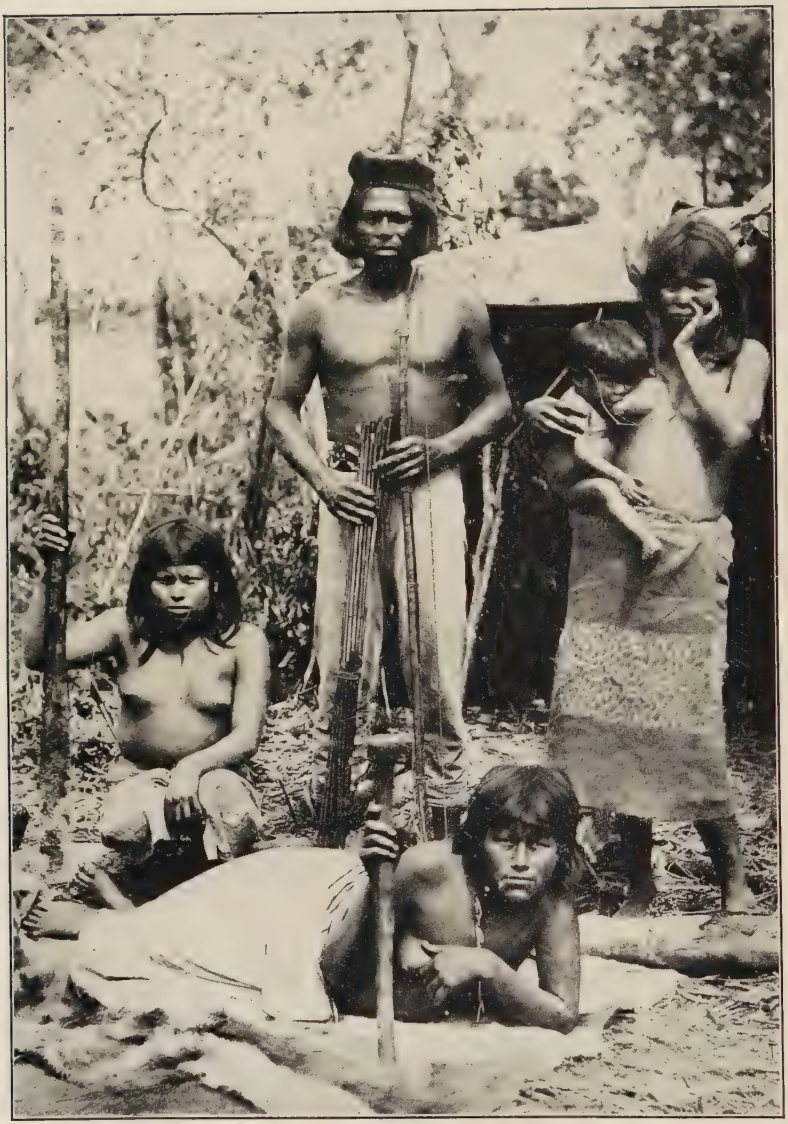
### THROUGH THE STRAIT OF MAGELLAN

I AM at the tail end of our hemisphere. At Cape Froward, the lowest continental point of the world. Three thousand miles nearer the South Pole than the foot of the Siamese Peninsula at the end of Asia. More than a thousand miles below the Cape of Good Hope at the bottom of Africa, with a distance almost equal to the thickness of the earth between myself and the northern parts of the United States.

I am on a little steamer in the Strait of Magellan. Just opposite, the black, rocky walls of Cape Froward rise almost straight upward to a height of twelve hundred feet, and behind them, glistening in the moonlight, are the glacial snows of Mount Victoria, two thousand feet higher.

I am at the end of the great Andean chain. These hills mark the jumping-off place of the mighty ridge that ties the continents together. Rich with copper, silver, and gold, they crawl from here on their sinuous way toward the North Pole. They span the Equator, they drop their heads at the Isthmus of Panama and end only at the Arctic Ocean, beyond the gold mines of Alaska and the Klondike. The hills to the southward are a part of Tierra del Fuego, above Cape Horn, and that great white frozen pyramidal cone rising among them is Mount Sarmiento, which pierces the southern sky more than one

Cape Pillar marks the western entrance of the Strait of Magellan. Great rocks of which it is formed, rising fifteen hundred feet above the sea, are visible to mariners many miles away.



Few people are lower in the scale of civilization than the Alacalufes. They live mostly on the water in their rude canoes, and depend upon coatings of seal oil more than clothing to keep them warm.

thousand feet above the altitude of Mount Washington. Behind and in front of my ship, here as black as ink under the shadows of the hills, there turned to silver by the full moon's rays, flows the Strait of Magellan, that salt-water river in which, moved by the tides, the two great oceans rush together and clasp their hands to bear up the commerce of the world.

The Strait of Magellan makes the passage between the oceans shorter by nearly one thousand miles. Cape Horn, on an island some two hundred miles south, is surrounded by waters which are always tossed about by terrible storms. To-night the Magellan is almost as quiet as a mill pond, and our ship steams along as smoothly as the boat which carries the hero away in the Swan Song of Lohengrin.

We are now about midway between the Atlantic and the Pacific. We entered the Strait by what is known as Smyth's Channel, opposite Desolation Island, about thirty miles from Cape Pillar, which marks its western end. We could see the two massive rocks of the cape as we turned to the eastward. Their steep sides tower up for a distance of fifteen hundred feet, and when the air is clear they are in sight for many miles.

Beginning at Cape Pillar, the Strait runs southeast to Cape Froward, then turns to the northeast, widening here and there as it goes, until it ends at the Atlantic between Cape Virgenes and Cape Holy Ghost. The channel is three hundred and sixty-five miles long, and its width varies from two to twenty-four miles. At times our vessel has been within a stone's throw of the shore, and again, in the misty air, where the passage widened, the waters seemed almost to bound the horizon. This is so only in

eastern parts of the channel, on both sides of which the shores of Patagonia and Tierra del Fuego are low. In the west there is little else than mountains, which are now snow-dusted and in many cases laden with vast glaciers sliding slowly down to the sea.

Below the Strait of Magellan there is a group of many islands, of which the smallest are mountain peaks rising above the waves and the largest is the Island of Tierra del Fuego, which is bigger than many of our American states. It has mountains and valleys, great forests and extensive plains, which have been transformed into some of the biggest sheep farms of the world. North of the Strait lies the end of southern Patagonia on the east, and on the west a continuation of the archipelago of Tierra del Fuego. These islands, as well as the Strait and almost all of Tierra del Fuego, belong to Chile. The Chilean government has surveyed the channels and harbours of the passage, and lights and buoys have been erected to aid navigation, but some of the region is almost as unknown as it was when Ferdinand Magellan, the great sailor, discovered the Strait for Spain in 1520. The land and the people have been misrepresented by passers-by from Darwin down to within recent years, and it is only lately that opportunities have been offered for careful investigation. Even now the savages I have seen here are less known than the tribes of central Africa, and not all of the islands have been explored. The sheep farmer, the gold digger, and the government vessels are, however, making headway, and within a few years this great archipelago will be a *terra incognita* no longer.

The generally accepted belief regarding southern Patagonia and Tierra del Fuego is that they are something

like the coasts of Greenland or those of the Arctic seas. The geographies represent them as wastes of ice and snow, desolate, forbidding, and terrible to the traveller. During this voyage I have spent several days winding in and out of the channels along the west coast of lower Patagonia, and have been rewarded by a series of moving pictures that cannot be surpassed.

Darwin compared the glaciers of Sarmiento in Tierra del Fuego to one hundred frozen Niagaras. The waters along the lower end of western Patagonia present combinations which make one think of a hundred Lake Comos, Lake Genevas, and Lake Lucernes linked together in one ever-widening, ever-changing river. Here are the beauties of the Thousand Islands of the St. Lawrence heightened by snow-capped mountains kissed by the sun, and mighty glaciers sliding down into masses of dark green vegetation. Here are giant rocks, cathedral-shaped, covered with moss, rising sheer up from the water for a thousand feet; mountains, their heads lost in the clouds, their feet buried in the sea; narrow gorges, in which the steamer must tack this way and that as it winds about between islands of green and islands of rock resting in lakelets; fields of floating ice, through which the boat crashes; narrow fiords, in which the black water is three thousand feet deep, and, in short, such a variety of scenic wonders of clouds, mountains, and sea that I doubt whether their like can be found in the world. Suppose you could take the most picturesque parts of the Andes, the Himalayas, and the Alps, sink them up to their necks in dark blue water, pull the cloud masses down with them into the sea, and wrap their rugged sides far up from the water's edge with a wonderful mantle of green, now

brilliant in the sunlight, now frosted with snow, and again so filled with ice that it lies in terraces up their sides, and you will have some idea of these lands at the southern end of our hemisphere.

But I despair of giving a vivid picture of our voyage through this archipelago. It lasted three days and was a series of wonders. All I shall attempt is to take you with me through some few places by a transcript of my notes made upon the ground. We start in the evening in the Bay of Coronel, near Concepción, on the west coast of Chile. When we awake next morning we are far out in the Pacific. The steamer is rolling, the white caps are dancing over the waves, and away off to the eastward we can make out the faint blue outline of south Chile. A day later, in storm and rain, we steam past the long, narrow island of Chiloe, which the government is trying to colonize, and on the evening of the third day we enter the wide Gulf of Peñas and come to anchor at the entrance of Smyth's Channel.

The water is still. The steamer moves slowly, and we seem to be in a great river rather than in the ocean. We are sailing among the clouds through the water-filled ravines of some of the greatest of the world's mountains. On our right are grass-clad islands. On our left are rugged, jagged peaks rising in all shapes out of the sea. There is one that reminds me of the Pyramid of Cheops, and there is another that is a fair likeness of the smashed-nosed Sphinx. In front the hills are climbing over one another like a troop of giants playing leap frog, and farther on they rise upward in fort-like walls of green a thousand feet high, losing themselves in that misty white cloud which rests upon them.

As we proceed the passage narrows and widens. Now we are in a lake surrounded by snow-capped mountains, now in a canyon, and now we sail by a break in the mountain walls, a deep fiord with moss-green sides snow-flecked a thousand feet up and filled with black water a thousand feet deep. As we look the sun breaks its way into the gorge and turns the water to silver. It scatters diamonds in the snow. Over there is a glacier, a great green mass shining out upon the ragged sides of a snowy mountain. The sun strikes it and it is a bed of emeralds in a silver setting.

Before us is an ever-varying panorama of sky and sea and land. We sail out of the sunlight into snow storms; then out of the snow into sun again. Now the sky is almost blue overhead, sprinkled with fleecy clouds. Cloud masses nestle in the velvety laps of the hills; they wrap themselves about the snowy peaks as though to hide them, and there they stoop down and press tantalizing kisses upon their icy lips. Upon the snow-dotted hills and dark water are dashes of silver where the rays of the sun have penetrated the clouds. The changing light makes the channel on one side of the ship black; on the other side it is a beautiful yellowish green; and behind, the ship has left a path of molten silver shining in the sun.

The hills change even as the water. Now they are dark. Now the sun brushes them with its rays and the ferns and moss and trees brighten. The ragged volcanic rocks stand out, and through the green and the black, falling hundreds and sometimes thousands of feet, are silvery cascades. These waterfalls are to be seen all along these inland channels. They come from the glaciers and the mountain snows.

On our third day in the channel I saw one of the strangest atmospheric effects I have ever beheld. The mountain-walled river had widened and we were again coming to narrows, when over our pathway in front of us a great rainbow bridge flung from the snowy summit of a low mountain in the south to the top of another mountain almost opposite on the north of the channel. It was a splendid opal arch of the gods founded on pedestals of frosted silver. As we approached, the rainbow faded, the sky was blue overhead, but a curtain of clouds had risen up from the water. When I first saw it I thought it was a field of icebergs. It was as white as snow and it extended upward to what seemed a height of several hundred feet, stretching across the channel from mountain to mountain. Above, the sky was still clear and the only other clouds to be seen were those hovering over the mountain peaks. We sailed out of the light right into this cloud wall, out of the dry air into a mist so thick that we could almost wash our hands in it. A half hour later we were again under a clear sky. At times the masts of the steamer were in the clouds and the deck clear and dry. Again the clouds would form a roof over the channel, and again the bases of the hills would be hidden and we could look over the clouds at the green and snow above.

It seems strange to think of green moss, green trees, and a matted mass of green vegetation, amid the snows and glaciers. That is what we have here. The glaciers slide down into the green, and the snow falls and melts upon it all winter long. Even in the jungles of India I have not seen so thick a growth of trees and plants as along the west coast of Patagonia. We have a chance to go on shore every afternoon when we anchor for the

night. Pushing our way into the country is, however, impossible. The trees are evergreens, generally small, but so dense that one could walk on their tops on snow-shoes. A bed of moss covers the ground waist deep about them, and great ferns, with leaves as long as a man's arm, extend in every open or rocky spot. The earth is saturated with moisture. The mould and rotting wood of centuries cover it, and one sinks in and stumbles about more than in an Irish bog.

It is only on the higher parts of the mountains that vegetation ceases, and only there that the climate is such as to produce glaciers and perpetual snow. The icebergs that we see in the channel came from these glaciers. They are among the great glaciers of the world, many of them surpassing, it is said, the largest in the Alps. In Tierra del Fuego they line the waterways in places with walls of ice a thousand feet high, and ships must sail carefully not to be struck by the icebergs, which in chunks of a thousand tons and upward break off with a noise like thunder and fall into the sea. Icebergs often fill Smyth's Channel, so that it is impossible to get through. This was the case last year, when one of the steamers was forced to go back and when the ship upon which I now am had its bow crushed in by the icebergs. This glacial ice is not like that in our rivers and lakes. It is as hard as a rock and of a crystalline green.

On our second day in the archipelago we stopped the steamer, lassoed an iceberg, and towed it up to the ship. It was a little berg, not bigger than a city lot, but it was of a beautiful opalescent green with a frosted silver top. It had many angles and projections. The steward and a boatload of sailors attacked it with crowbars and broke

off enough ice to last for the rest of the voyage. One of the great log chains used for hoisting heavy cargo was first coupled about the corner of one of these ice masses, then a lever in the engine room was pulled and a section of the iceberg was broken off and raised by a derrick to the deck of the vessel. We must have taken on a hundred tons of ice.

During our voyage through these strange islands we have seen but few animals and birds. Now and then we have passed a small school of seals, which pop their heads out of the water and take a peep at the steamer as it goes by. We have seen half-a-dozen whales, and occasionally an albatross or a gull.

We have had, however, a number of visits from the wild savages of the Magellans, the naked Indians of the Patagonian channels, who are among the least-known wild men of the world. They are different from the Onas and Yaghans of Tierra del Fuego, with whom missionaries have worked, and several of whom, years ago, were carried to England. These Indians are known as the Alacalufes. There are only about five hundred of them. They have no chiefs or tribal relations. Each family lives to itself.

The Alacalufes are strictly canoe Indians, living almost entirely upon the sea. They are found only in these straits and off the coasts of southern Patagonia. They sleep sometimes on land in little wigwams three feet high, made by bending over the branches of trees and tying them together. They build a fire in front and crawl into them for the night. Their canoes are well constructed. They are about fifteen feet long, three or four feet wide, and perhaps two feet deep. They are made of bark sewn

The passage through the Strait of Magellan is one of the most splendid scenic voyages of the world, with frozen Niagaras sliding down the green-forested mountains and cathedral-like rocks towering one thousand feet above the water.

Punta Arenas, the world's southernmost city, thrives on the sheep industry. It annually exports millions of pounds of wool noted for the fact that it washes very white and takes delicate dyes exceptionally well.

together with sinew. They are cross-ribbed, and can be easily paddled. In the centre of each boat is a fire built on some earth, about which sit such of the family as are not paddling the boat. Queer-looking people they are. Most of them wear no clothes whatever, and are apparently comfortable amid the snows of winter with only a coat of seal- or fish-oil upon their skins. They are glad to get such clothing as they can beg from white men, and they come about the ship and ask for cast-off garments, food, and tobacco. Some we have seen were as naked as Adam and Eve before the fall. Others wore bits of old clothes.

One man, who brought his family alongside in a canoe, had on a short vest, open at the front, and a tiny apron as big as a lady's handkerchief tied to a string about his waist. His favourite wife, clad in a string of beads, sat in the boat near the fire, with a naked boy of two sucking his fingers as he leaned against her bare legs; his other wife, a buxom girl in her teens, held an unswaddled baby to her breast with one hand while she paddled the boat with the other. I was shivering in my overcoat as I looked at these people, but they did not seem cold or miserable. The children were fat. The young mother at the end of the boat had on nothing but a cast-off sack coat, which she had thrown over her shoulders to cover partially herself and her baby. As she paddled this kept falling off, exposing her person and that of the infant.

The men and women were rather under- than oversized. They had faces somewhat like those of our Indians. The men's faces were dirty, evidently from paint, and the naked brave in the vest had a thin black moustache. They had black hair; that of the women hung long, and that of the men was cut off so that it just covered the ears and

fell down in a thick black fringe, or bang, over their eyes. Their skins were of a coffee-brown colour, and all had very white teeth, which they showed again and again as they laughed. Their voices were not unpleasant, and they mimicked us as we called out to them.

The man in the vest had two or three otter skins, which one of the officers of the ship tried to buy. As he would not come on board, the officer crawled down the side of the ship above the boat and held on there by a rope while he tried to make the trade. He had a big butcher knife in one hand while he held on to the rope with the other. He wanted the savage to give him two skins for the knife, but the Alacaluf thought one was enough. He would not give up the skin until he had the knife in his hand, and in the trade he displayed a wonderful shrewdness and ability to bargain. Of course, neither party could understand the other, and neither would trust the other. The only things that can be used in trading with these people are bright cloth, beads, tobacco, and knives. They do not know the use of money, and would rather have a jack-knife or a hatchet than a genuine gold brick. They were evidently afraid to come on board, and I am told they are by no means friendly to strangers, and will kill them if they can attack them with safety. They use slings to defend themselves, but do not hunt.

The food for the family is usually obtained by the women, of whom each man has one or more, as he can get them. They bring in fish, mussels, and now and then a fox, seal, or otter. The women fish with lines, but without hooks. A little chunk of meat is tied to the end of the line, and when the fish has swallowed this it is jerked into the canoe. The Alacalufes are also fond of whale

meat. A dead whale is cut in pieces and buried, to be eaten in its various stages of decomposition as long as it lasts. They understand what tobacco is, and those we have met have been as anxious to get it as food. They had but a few foreign words, one of which was "*Frau Lehman,*" the term by which they designate all other people, and the two others, "*galleta,*" the Spanish word for sweet cakes, and "*tabac,*" the German for tobacco.

## CHAPTER XVI

### THE SOUTHERNMOST CITY OF THE WORLD

PUNTA ARENAS is distinguished as the southernmost city of the world. It is at the tip of the South American continent on the northern coast of the Strait of Magellan, midway between the Atlantic and the Pacific oceans, and more than a hundred miles north of Cape Horn, The city is the commercial capital of a vast region of sea and land that is but little known to the rest of the world. From where I am writing I can see the blue forests of Tierra del Fuego on the opposite side of the Strait and behind me, stretching away for hundreds of miles to the north, are the mountains of Patagonia with myriad flocks of sheep grazing on their slopes.

There is no city of any size within one thousand miles of Punta Arenas and its only connection with the rest of the world is its radio station, which daily receives wireless messages from Santiago, Buenos Aires, and even more distant points. The radio stations of Chile are rapidly increasing. I have seen their towers at every important port on the long coast from Arica, on the edge of Peru, to the Strait of Magellan. One has even been erected on Juan Fernandez Island, and the home of Robinson Crusoe now has ears for the voices of all the world.

All of the supplies for Punta Arenas are brought in by the steamers passing through the Strait of Magellan.

The Chilean government has proposed to extend its railroad down here, but it will be a long time before the Longitudinal System can be pushed through the Andes to the Strait, and during this generation, at least, Punta Arenas will have to rely upon ships. The city has a big business as a coaling and supply station for the vessels passing through. She charges all that the traffic will bear for every kind of goods, and when our battleship, the *Oregon*, coaled here on her long way around the hemisphere from San Francisco at the outbreak of the Spanish-American War, she had to pay a fancy price for coal.

The port is free and there is much interchange of goods by the steamers and sailing vessels that pass through the Strait. Just now there are English and United States steamers in the harbour loading and discharging freight, and a ship from New Zealand with a cargo of frozen sheep for London has just come to anchor. There are regular steamers that ply between Buenos Aires and Valparaiso through the Strait, and ships of two large British lines call here fortnightly. There are ten villages in the country about which can be reached by automobile or by coast steamers, and something like one thousand miles of roads have been built or are under construction.

Punta Arenas is the capital of the Territory of the Magellans, the southernmost political division of Chile. This territory consists of the southern end of the range of the Andes, running from a little below Valdivia to the Strait of Magellan, the islands at the western end of the Strait, and most of Tierra del Fuego. It comprises about one fourth of all Chile, having a land area nearly equal to that of our state of Missouri and a population about equal to that of Alaska. The Magellans might be called

the Alaska of Chile although they are only one ninth the size of our great land of the North. Their climate is like that of southeastern Alaska.

Punta Arenas is an up-to-date municipality. Twenty years ago the greater part of it was still in the woods. Stumps stood in the principal streets, and in the rainy season the roads were rivers of mud. To-day the town is well paved, and it has a plaza surrounded by good houses and stores. The streets are lighted by electricity, and there are churches, schools, and clubs. It is the home of the farthest-south newspaper in the world, the *Magellan Times*, a thoroughly up-to-date sheet in every way. The value of the city property is now estimated at more than ten million dollars.

The people of Punta Arenas are of a dozen different nations, and come from all parts of the world. There are English and Germans as well as many Danes, Norwegians, and Swedes, who have a large share in the navigation of the Strait. There are Australians and Italians, Chileans and Indians. Some of the most successful business men are Scotchmen, and the Scotch also have large interests in the sheep industry.

Until within recent years the Territory of the Magellans was supposed to be worthless. It was so near the South Pole that many thought it all ice and snow, and its mountainous character was such that no one imagined the land could ever be of any value. To-day this region has developed a live-stock-raising industry that bulks large in the assets of Chile. It has one sheep-raising company, capitalized at more than seven millions, which is now producing nine or ten million pounds of wool every year. This company owns two million acres of land, and its

sheep number more than twelve hundred thousand. It has also twenty-five thousand cattle, and more than nine thousand horses. It sheared more than a million sheep last year, and the average fleece weighed almost eight pounds. It has more than a half million lambs, and ships vast quantities of frozen mutton to England.

La Sociedad Explotadora de Tierra del Fuego, or the Tierra del Fuego Exploration Society, owns sixteen hundred thousand sheep besides cattle and horses. It has its own meat-canning factory and a plant for producing tallow by boiling down sheep fat.

A freezing plant has recently been installed there, and there is another freezer at the Rio Seco to which one hundred and fifty thousand sheep are annually shipped. The yearly output of these two plants is almost four hundred thousand carcasses, and the tallow works connected with them have marketed more than three quarters of a million pounds of that article.

Sheep were first brought to the Strait region in 1878. They were imported from the Falkland Islands, which lie about two hundred miles to the east, opposite the entrance to this great ocean passage. Within seven years the flocks numbered forty thousand head. As the value of the lands for sheep raising became known, farmers and stockmen came from Australia and Europe, and developed what is now an enormous and profitable business. Sheep are pastured not only on the mainland north of the Strait, but also on Tierra del Fuego on the southern side of the passage. This great island belongs partly to Chile and partly to Argentina. The greater part of Tierra del Fuego is made up of plains and wide stretches of moorland covered with grass, which is green in the summer and turns

reddish brown as winter comes on. This grass furnishes good grazing all the year 'round. In the winter the sheep sometimes dig down through the snow, which, as a rule, melts soon after falling. The grasses of the Strait are noted for their richness and sweetness. They are excellent for the production of both mutton and wool and would feed far more stock than they do were it not for the rats. As it is, this pest is so prevalent that it now takes three or more acres to support one sheep. The rats not only eat the grass, but they tunnel the earth to such an extent that it is impossible to drive over the plains with a wagon, and on horseback one has to ride very carefully. Cattle are used as rat exterminators. They are driven over the ground and trample the rats in their burrows.

Among the other enemies of the sheep farmer in Tierra del Fuego are vultures, foxes, wild dogs, panthers, and the Ona Indians. The sheep are so fat that if one of them falls down and rolls upon its back it cannot turn over of itself and simply lies there and kicks. The vultures are always watching the sheep, and when such an accident happens they attack the helpless animal and pick out its eyes. After this it may live some days, but as soon as it is dead the vultures finish their work by tearing its flesh from the bones. The foxes of Tierra del Fuego are much like wolves. They are as big as dogs. They attack the sheep and drive them into the streams where they drown. There are wild dogs in the forests of this region, which come out in packs of from ten to thirty and worry the sheep. Then there are the panthers, one of which often kills a hundred sheep in a night. The Onas will steal and drive off five hundred sheep at a time. These Indians will cut a bunch of sheep out of a flock and drive them off

A cleared strip through the forest marks the boundary between the Chilean and Argentine portions of Tierra del Fuego. In the division, the best of the level sheep lands went to Chile, while Argentina got the more mountainous and wooded sections.

Argentina sends some of her convicts down here to the very tip of the tail of our hemisphere at Ushuaia on the bleak southern coast of Tierra del Fuego.

into the woods. Many of the sheep are lost as they are run over bogs and through streams, and when they reach their stopping place it may be that only two thirds of the number remain. Of these the savages kill what they can eat and drown the rest. They bury the dead sheep in the bed of a creek or pond. After a week or so, when the flesh is pretty well decomposed, they come back, dig it up, and eat it.

The sheep farms of Tierra del Fuego are much like those of Australia. They are fenced with wire, and the sheep are kept in large paddocks, some of which are as big as an average American township. The ordinary flock contains about two thousand head, and each flock has its own shepherd, aided by dogs. The dogs are Scotch collies, so intelligent that they seem almost human. They will pick any sheep from a flock at the command of their master, who directs them by a motion of his hand which way to go. If he waves to the front, they know they are to go ahead. If he throws his hand to the rear they come back, and the shepherd's hand held up in the air brings them to a standstill.

Most of the shepherds are Scotchmen, who come to the Strait of Magellan on five-year contracts. They receive from thirty to forty dollars a month, and have in addition house rent, fuel, and meat. Their houses are two- or three-room shacks scattered over the farms. The fuel comes from the woods, and their meat is mutton from the flocks they herd.

The most important part of the year at the Strait of Magellan is when the shearing is done. This season begins in January, and on the big ranches may last for two months. Much of the work is done by professional

shearers, although the shepherd comes in to help handle the animals. On some of the farms this work is paid for by the fleece. When a man begins to shear he is given a book in which are recorded the number of animals he shears during the week and the amount to his credit. If any dispute arises it is to be settled by a committee composed equally of the owners and employees. The company furnishes the shears, of which every man gets three pairs at the start and an additional pair for each thousand animals.

Latterly flocks in Tierra del Fuego have been sheared by machines. A set of knives or clippers, like those used by barbers, is attached to a cord running on an overhead pulley and the shearer moves these clippers over the skin of the sheep, cutting off the wool. This is said to make a cleaner and closer job and does not cut the skin. After shearing, the fleeces are carefully spread out, being laid one on top of the other, and packed in bales of five hundred pounds each. Most of the wool goes to the English markets.

The average fleece now produced in Tierra del Fuego weighs seven and a half pounds and upward, which is much above the average in the United States. The wool is of good quality, having a staple of three or four inches and selling at the same price as the wool of New Zealand. The sheep are not washed and the wool is exported in its greasy state. Tierra del Fuego wool is especially valued for its snowy whiteness when washed, and because it will take the most delicate dyes.

## CHAPTER XVII

### TIERRA DEL FUEGO

THE archipelago of Tierra del Fuego contains as much land as Kansas. It is wider from east to west than from Cleveland to Chicago, and from north to south it is longer than from New York to Boston. Most of the hundreds of islands are wooded and mountainous, but a few of them have valleys and plains covered with rich grass on which sheep and cattle rapidly grow fat. The largest islands are Onisin, or King Charles Southland, or Tierra del Fuego proper; Desolation Island, which lies near the western entrance to the Strait, and along which I coasted for miles on my way to Punta Arenas; the Isle of St. Ives, Clarence Island, and Dawson Island, a little farther to the eastward, and the large islands of Hoste and Navarino on the south. Cape Horn itself is on one of the small islands on the southernmost part of the archipelago.

The chief island is Tierra del Fuego which is half as big as Ohio. Chile owns nearly all of the islands of the archipelago and most of the sheep lands of Tierra del Fuego. The lands of the Chilean part have been taken up within the past few years under leases from the Chilean government. The Argentine portion is not so well settled, owing to the difficulty of access and uncertainty as to the boundary. Nearly all the southern and eastern portions of the island are plains, wide stretches of

moorland, covered with grass. Around the west and south coast is a rim of mountains, many of which rise steeply from the water, and which probably gave Darwin the basis for his statement that there was not a level acre of ground upon the whole island. The plains are in the interior. Running midway between north and south, and extending across the country, there is an elevated tableland and beyond this to the north is a second elevated plain.

It seems strange to think of dense vegetation in Tierra del Fuego. One might almost as soon believe that grass could be raised on an iceberg. The truth is, however, that the winter climate of Tierra del Fuego is milder than that of Canada. The lowlands are seldom covered with snow for more than a few days at a time, though one is in sight of snow and glaciers on the mountains all the year round. The climate varies, but it is generally cool, cloudy, and windy. The most objectionable feature is the wind, which at times blows for days at a stretch and sends the chilly air through one's bones in penetrating blasts. Tierra del Fuego is in the latitude corresponding to that of Labrador, but so are a large part of England and a big slice of Holland; and I imagine that, barring these winds, "Tierra del," as they have nicknamed the island, has winters more like those of northern Europe than those of Labrador.

The vegetation is that of the Temperate rather than of the Frigid Zone. The mountain slopes, up to about one thousand feet, are walled with a growth of trees, ferns, and mosses so dense that it is almost impossible to get through the entanglement. On the sides of the steeper mountains the trees, instead of growing straight up, hug the earth;

so that a tree, with a trunk as thick as a man's waist, may be only three feet high, but spreads over a large piece of ground. This is probably due to the mountain snow, which presses down the trees and at the same time keeps them warm enough so that they can grow.

The most common tree here at the tail end of creation is the beech. There are vast forests of Antarctic beeches in Chilean Tierra del Fuego, the trees of which are eighty feet tall and six feet thick. They make excellent lumber, and some are now being cut down and shipped to Buenos Aires. One species of the beech tree is of our evergreen variety; another is a common beech like that of our Central States. There are also trees of the magnolia species. There are twenty-five different varieties of shrubs and bushes besides many wild berries. Wild strawberries of great size and delicious flavour are found in their season, and there are also wild grapes and celery. Ferns are to be seen almost everywhere. The sheep farmers raise cabbages, potatoes, turnips, and peas in their gardens, and they tell me that in the spring and summer the pastures are dotted with wild flowers.

Tierra del Fuego has been called the "Klondike of South America." So far, however, there is no justification for the term. There is much gold, no doubt; but as yet no large quantities have been discovered, and that found is difficult to mine. The gold is all placer gold; some of it is in the shape of nuggets as large as marrowfat peas, but the greater part is in leaflets or scales.

Most of the mines are in the southern part of Tierra del Fuego and the islands adjacent. The gold is found on the shores, the clay containing it running down under the water and being exposed only at low tide. The

beaches are covered with shingle and sand, which must be removed before the bed rock is reached. At the Slogget Bay diggings, for instance, there is six feet of sand and gravel above the bed rock. This has to be shovelled off, and at the next tide the gold-bearing clay is again covered. Almost similar conditions exist at the washings on the island of Navarino and elsewhere. From what I have been able to learn there are, I should judge, only a few places where gold has been found in profitable deposits, and these are nothing in comparison with the great gold mines of our Western States. Sluice boxes with machinery pumping the water from the sea and gathering the gold dust with mercury and copper plates have been used by those who have worked these deposits. Most of the mining, however, is spasmodic and uncertain. The territory is exceedingly difficult to reach, and prospecting is coupled with such hardships and expense in the way of getting supplies that the American miner had better stay at home.

But let us look at the savages who live at the lower end of our hemisphere. I have already described the Alacalufes or canoe Indians, found on the waterways of the western part of the archipelago. Tierra del Fuego and the larger islands are inhabited by two tribes, each of which is different from any other Indian tribe of South America.

The Onas are found chiefly in northern and central Tierra del Fuego; they are very savage and wage war on the whites. Once two Chilean naval officers were killed by them while surveying one of the smaller islands. When found, the Chilenos were naked, their clothing having been stripped off, and in one of the bodies were twenty-five arrows with glass heads.

The shepherds are said to shoot the Ona Indians at sight when they become especially troublesome, for they say it is cheaper to kill than to civilize them or break them of their sheep-stealing. But the Roman Catholics have a mission station on Dawson Island, not far from Tierra del Fuego, on which are some Onas, and are doing what they can for these primitive people. In their natural state the Onas as a rule go naked. In some instances, however, the missionaries have been able to induce them to wear some clothes.

The Onas sometimes wear a strip of guanaco skin over the shoulders. The adults have breech cloths, but the children wear nothing save the coating of fish oil with which they are liberally smeared. The oil serves to keep out the cold; and so far I have yet to see one of these Indians shiver, although in my winter flannels and overcoat I myself have been none too warm. The Tierra del Fuegians have been painted by travellers as wretched and miserable in the extreme. They appear to be sleek, fat, and well fed, and are generally good natured. The Alacalufes I saw wore a perpetual grin, and the Onas and Yaghans are, when among themselves, full of good humour.

An Ona house is merely a hole in the ground with a windbreak of branches or trees bent down and tied together over it. The hole is about three feet deep and just big enough to contain the Indian and his family. They use it chiefly at night, crawling in and cuddling up together, with their dogs lying about and over them for warmth. Such fires as they make are for cooking, and are in front of and outside the dug-out sleeping-place. They do not like to stay more than a night or so in the same place, as they have an idea that the devil, or evil spirit, is after

them, and that they must move on or he will catch them. The Onas are of a good size, though not such giants as travellers have pictured them. The men are usually about six feet tall, and the women about five feet five inches. The Yaghans, who are all short-legged from living in canoes, are much smaller. Were it not for their stomachs, the Onas might be said to be well formed. They are straight, deep-chested, and muscular. The women when young are plump and well rounded, with fine necks and breasts. They are, however, great gluttons, and sometimes gorge themselves so that their stomachs are stretched tight like drumheads and stick out from their bodies. They have lighter skins than our Indians and high cheek-bones, flat noses, straight, dark eyes, and rather full, sensuous lips. Their hair is straight and black, and among the men the fashion is to have it singed at the crown, to form a sort of tonsure. The women let their hair grow, and it hangs down over their shoulders. The men do not have beards until late in life, and as they do not like to appear old they usually pull out the stray hairs on their faces. An Ona seldom has a beard before he is thirty-five or forty.

The Onas apparently do not care whether their food is fresh or not. Before the advent of sheep farming in Tierra del Fuego, they lived on fish, fungi, and guanacos. Guanacos are wild animals of the same genus as the llama. They seem to be a cross between the deer and the camel, and are about the size of a very large sheep. The Onas run them down with their dogs and follow them also on foot. They are fast runners, and take six-foot strides, so an Argentine man who lived on the islands has told me. They eat the decayed flesh of stranded whales which

The six-foot Ona Indian of Tierra del Fuego was the "Patagonian giant" of early travellers' tales. With bow and arrow he hunts the guanaco for food and clothing, or, when he can, steals sheep from the white men.

To those who think of Tierra del Fuego as a frigid land it is surprising to find its mountain slopes up to about a thousand feet densely wooded. Its great forests of Antarctic birch furnish excellent lumber.

they find on the shore, but, as a rule, do not go out in canoes to fish as do the Yaghans and the Alacalufes. They also make traps to catch game. They use only bows and arrows in war and for hunting. The arrows used to be tipped with flint, but now they are pointed with pieces of glass made out of the bottles thrown from the steamers passing through the Strait of Magellan.

The Ona women weave very pretty rush baskets of a bowl shape. They cure the skins which their husbands bring in from the hunt and sew them together with sinews into robes or rugs. The Onas, I am told, have no Great Spirit, or God, as our Indians have. They practise polygamy, one man having several wives, whom he buys of their fathers at as low prices as he can.

As for the Yaghan Indians—before the whites came there were something like three thousand of them. They were described by sea captains as a healthy, hearty, naked, savage race. The English early established a mission in south Tierra del Fuego and persuaded them to put on clothes. It is claimed that with the wearing of clothes came consumption and pneumonia, and that these ailments have reduced their number to less than five hundred. Both Onas and Yaghans are fast dying out.

They live in groups of about thirty families. They are not cannibals, as has been charged. Their principal food consists of molluscs, fish, seals, birds, strawberries, and fungi. Their women cook these things in different ways; they roast birds on the coals by putting red-hot stones inside of them; they bake eggs by breaking a small hole in one end and then standing them upright in the embers before the fire, turning them round and round to make them cook evenly. They bake the blood of animals,

but, as a rule, eat their vegetables raw. The women are both fishers and hunters. The men make the canoes, but the women paddle them; the latter are good at the oars and usually are better and more fearless swimmers than the men.

One of the wonderful things about the Yaghans is their language. With no written language, they yet have a vocabulary of about forty thousand words. Mr. Bridges, a missionary who made a Yaghan-English dictionary, gives this as the number. Shakespeare's vocabulary, it is known, contained only twenty-four thousand words.

## CHAPTER XVIII

### IN THE FALKLAND ISLANDS

THE Falklands are among the little-known islands of the Atlantic Ocean, but their name was on the lips of everyone early in the World War when the British destroyed, along their shores, the German squadron which had wiped out Cradock and his command off the coast of Chile.

The Falklands lie about three hundred miles east of Cape Virgenes, at the Atlantic entrance to the Strait of Magellan, less than a day's steaming for one of England's great war vessels. They are even nearer the track of ships going round Cape Horn. With the exception of Punta Arenas, which belongs to Chile, and which by the neutrality laws may not furnish coal except in times of peace, the only coaling port near the islands is at Montevideo, a thousand miles to the northward, the next nearest, perhaps, being the Cape of Good Hope, at the lower extremity of the African continent more than four thousand miles away.

The islands were discovered by an English commander named Davis, in 1592, and two years later were sighted by Sir Richard Hawkins, who named them the Maiden Islands in honour of Queen Elizabeth. Later on the Spanish government claimed them, and the Argentine Republic, as the heir of Spain, looked upon them as her property. In 1833 England again took possession of

"Sooner shall these mountains crumble to dust than the people of Argentina and Chile break the peace which they have sworn to maintain at the feet of Christ, the Redeemer." So reads the inscription on the Christ of the Andes.

in the world are feeding and from them upward of a million dollars' worth of wool is exported every year. One company alone owns two hundred and forty thousand sheep, and the man who owns less than twenty-five thousand is considered a small farmer indeed.

Outside of sheep raising there are no other industries. I was told there were not one hundred pigs in all the islands together; and although the grass is good for cattle, there are but few in the Falklands. Not enough wheat is raised to make a Maryland biscuit, and the only signs of agriculture are the little garden patches of cabbages, potatoes, and turnips grown in patches back of the houses of the shepherds on the moors, at the capital, and at the other small settlements scattered here and there over the two chief islands.

The Falklands are a veritable cave of Æolus. The cold winds blow almost all day long and every day; it is said they sometimes blow the vegetables out of the ground. They blow so hard that not a tree can live, and there are not enough bushes to furnish switches for a country school. The Governor told me that it was his ambition to raise at least one tree, and that he had already made several attempts, but in vain.

The pasturage, however, grows luxuriantly, and the sheep keep fat, if the land is not overstocked. When they can find it, the sheep feed on a curious grass, which is a tonic as well as a food for the animals eating it. It is, in fact, a sort of a vegetable cocktail. It is called tussock grass, and has a stalk from four to six feet high and blades about seven feet long. The plants grow close together in bunches, as many as two hundred and fifty roots springing from one plant. Animals eat the roots

as well as the leaves, and, feeding upon them, fatten rapidly. The roots are even eaten by men, and it is said that two Americans once lived upon them for fourteen months on one of the smaller islands. The roots of the old plants decay and raise the grass upward, so that it grows upon a sort of cushion of manure. Some of these cushions are six feet high and five feet in diameter, so that the grass springing from them makes them look from a distance like a grove of low palm trees. The tussock grass grows along the coast even down to high-water mark. It is fast disappearing, however, as the sheep are so fond of it that they eat it far down into the roots.

Another odd plant which grows in the bogs looks like a stone. It forms bunches from three to eight feet tall and is as hard as a rock; indeed, it is so hard that one cannot cut it with a knife. On hot days a pale yellow gum comes out on its surface, and a rich aromatic odour fills the surrounding air. It is known as the balsam bog.

It is always cloudy in the Falklands. The air is moist, and the outlook is dreary in the extreme. Imagine a dull, leaden sky hanging low over reddish-brown moors out of which, here and there, jut the ragged teeth of white rock masses. The land is gently rolling, with here and there a ragged hill. The soil is black and full of peat. In places it is streaked with little streams and spotted with treacherous bogs, in which horses and men are sometimes lost. The ground is so soggy, in fact, that wagons cannot be used. There is not a four-wheeled vehicle in the whole country. Carts can be used only in Port Stanley. All travel is on horseback, and a stranger dare not go from one sheep farm to another without a guide. Such hauling as is done by

the shepherds is on sledges dragged over the wet but snowless ground by horses. All herding of sheep is done upon horses and with dogs, which are raised and trained for the purpose.

Notwithstanding all this, the Falklands are excellent for the raising of both cattle and sheep. The latitude is, roughly speaking, the equivalent in the southern hemisphere of that of Holland in the northern hemisphere, and the animals feed out all the year round. Before sheep were introduced, the regions fairly swarmed with wild cattle and wild horses; it is estimated that there were once eight hundred thousand of these wild cattle. Now these have all disappeared, though almost as many sheep have taken their places.

The wild cattle occasioned the first settlement. In 1844, a rich cattle- and hide-dealer of Montevideo, named Lafone, bought the right to the southern portion of East Falkland, together with all the wild cattle on the islands, for fifty thousand dollars down and the promise to pay one hundred thousand additional in ten years from 1852. In this deal he got over six hundred thousand acres of land, besides the skins of the wild cattle. In 1852, he sold this property to a company for one hundred and fifty thousand dollars, and since then this company has been the leading power in the Falklands. It has bought more land, until it now owns above a million acres, with about three hundred thousand sheep. Its boats periodically make the round of the islands, carrying to the farmers such goods as they order, and bringing their wool to Stanley for shipment to Europe. The wool is put up in bales just as we bale cotton. Much of it goes to the markets by the regular steamers. The ship on which I

came took on twelve hundred bales of six hundred and fifty pounds each.

It does not take many shepherds to care for the large flocks. The farms are divided up into fields of several thousand acres each and fenced with wire, so that all the shepherd has to do is to ride about among the sheep and take them out of the bogs when they fall in or turn them over if they fall down. They have to be dipped to keep off the scab, and at shearing time they are driven to the wool shed and shorn. The wool is not washed, but is carefully cut off, packed in bales, covered with bagging, hooped with iron, and shipped thus to London for sale.

Most of the sheep are of the Cheviot and Australian breeds. They have heavy fleeces, the average being from eight to ten pounds. Sometimes they run as high as twenty-one pounds, the actual weight of a fleece recently sheared.

The life of the shepherds on the Falklands is a lonely one. Like the shepherds of Tierra del Fuego they are Scotchmen. Most of them are married and have large families. Their houses are scattered over the farms from fifteen to twenty miles apart; they are usually built near peat beds and near little inlets, where the company's boat can bring supplies. Besides his wages the shepherd gets allowances of meat. The meat, of course, is mutton. His fuel is peat, which while it costs nothing, he must dig for himself. In addition to this, he has a garden patch, and with mutton and vegetables he does very well. Flour and other staples he must buy. His home is usually a little cottage of two rooms and a lean-to roofed with corrugated iron. One room serves as a kitchen and living room, and in the other the family sleep.

Smartly uniformed and well set up, the Argentine customs guards on the Transandine line give at once a favourable and a correct impression of the country and people soon to be visited.

Because of high freight rates by rail, the old trails across the Andes are still used. The herds of cattle driven over the passes between Chile and Argentina must have their front hoofs shod so as not to wear them out on the down grade.

If there is an overflow, or a guest arrives, the loft, or attic, is also used as a bedroom. The cooking is done in a curious, oven-like pot, which is shelved over a grate set in the stone wall of a chimney or fireplace. The hot ashes from the burning peat fall down upon the pot and around it. The pot, which is tightly closed at the top, serves alike for boiling, baking, and stewing. The shepherd has mutton as a steady diet; he has mutton chops for breakfast, roast mutton for dinner, and a slice of cold mutton for lunch or supper.

The herders seldom leave their farms and the women often remain upon them for years at a time. I heard of one woman who had not been to town for eighteen years. Her last visit was when she came to Port Stanley to be married. Think of living away out on the dreariest moorland, under the dreariest sky, in a two-roomed cottage, with no neighbour within fifteen miles, and coming into town only once in eighteen years!

One would think that the children brought up under such circumstances would be wild and uneducated. They are not. They are as intelligent and well-mannered children as you will find in any country community. There is a peculiar institution in the Falklands known as the travelling schoolmaster. He is paid by the government, receiving about four hundred dollars a year, to go from one shepherd's house to another and teach the children. The time allotted to each family is a fortnight, and if three families can bring their children together they thus get six weeks of schooling. The schoolmaster lives two weeks with each family, at the end of which, having laid out a plan of home study for the children, he is sent on horseback by the shepherd to the next family, which may be

twenty miles away. In the course of time he gets back to his old pupils, examines them in what they have gone over with their parents and sisters, and then takes them as much farther on the road to learning as his two weeks' stay will permit.

The bishop and the parson of Port Stanley, who are also paid by the government, make a tour of the island once or twice a year to examine the children, not only in their catechism, but in their secular studies. These children are descended from the best stock of the highlands of Scotland. Their ancestors are among the thriftiest people in the world; indeed, many of the shepherds save money, and not a few have taken their savings to Patagonia where they become sheep owners themselves. There are no beggars in the Falkland Islands.

Let us take a look at Port Stanley, the capital. It has but seven hundred inhabitants, including the governor and his officials; but it has more business than many towns five times its size. It is perhaps, in its way, the richest capital city in the world, for every one of its inhabitants has all he can eat, and to spare. Port Stanley is situated on Stanley Harbour, just beyond Cape Pembroke, at the eastern end of East Falkland. Its roadstead is a safe, landlocked bay, about half a mile wide and five miles long, with an entrance so narrow that a large vessel could hardly turn about in it.

On the south side of the harbour, climbing a gently sloping hill, are a hundred or so neat one- and two-story cottages of wood or stone, with ridge roofs of corrugated iron. Viewed from the steamer, Port Stanley resembles a German village, and a closer look shows that every little house has its front yard and garden, and that the

front doors of even the poorest of the cottages have vestibules. These are to shield the visitors and the families from the cold wind. In nearly every window are potted plants and flowers, for they can not grow out of doors, and I venture to say that there is not a town of its size in the world that has so many greenhouses and conservatories.

There is a plant on the islands called the tea plant whose leaves are used for brewing a home drink; it has berries of a rose-red colour. Celery grows wild. Penguin eggs as big as goose eggs are plentiful in season. They are delicious eating and cheap. Penguins themselves are such a drug on the market that they sometimes sell for a dollar and a half per hundred.

Beside each house is the peat pile. The black cubes come from the bog on the top of the hill, at the foot of which lies Port Stanley. Everyone here can get his fuel for the digging, and nearly every householder in Port Stanley goes to the moor and chops out his peat blocks for the winter.

Some of the houses are quite pretentious. The manager of the Falkland Island Company has a house containing a dozen rooms, and the cottages of the governor cover perhaps a quarter of an acre, all of the rooms being on one floor. There are three churches, one of which is called the Cathedral. This is presided over by the bishop of the Falklands. Another church is the Roman Catholic, and a third is that of the Baptist denomination. There are two hotels, or public houses, where one can get a bed or a drink.

Port Stanley has a post office, at which the monthly newspaper mail averages five pounds per family. It has

a postal savings bank, and though there are only three thousand people in the Falklands, yet the depositors in this bank number eight hundred. The colony has a governor appointed by the Crown, who gets a salary of seventy-five hundred dollars a year.

## CHAPTER XIX

### OVER THE ANDES BY RAIL

ACROSS the Andes by railway!

Climbing by rack and pinion over the highest range of our hemisphere!

Shooting through the darkness of the two-mile tunnel from Chile into Argentina!

Ascending almost straight up from the Pacific Ocean to peaks lost in the clouds, and coasting from the snows down into the broad lands that extend to the Atlantic.

This is the story of my trip over the transcontinental railroad that ties the coasts together. It is less than twenty-eight days by steamer direct from New York to Buenos Aires, but we can go from New York to Valparaiso in about twenty and be in Buenos Aires in twenty-two days if we choose the Transandine route.

The time across the continent can be greatly reduced. The continuous trip now takes about thirty-eight hours, whereas we travel from New York to Chicago in less than twenty hours. The chief delay here is in crossing the mountains, but the journey from port to port will some day be made in thirty hours, or by express trains of the future, within one day.

I left Santiago at about six o'clock in the evening and four hours later had passed out of the great central valley of Chile and climbed to the station of Los Andes, where the narrow-gauge track begins. Los Andes is a tiny rail-

road town consisting of little more than a hotel, but the hotel affords some unexpected comforts. It has several hundred large rooms, each of which has hot and cold water, an uncommon thing in this part of the world. The rates are two dollars and twenty cents for lodging, including coffee and bread in the morning. And the coffee is good.

We left Los Andes about eight o'clock next morning and wound our way through a narrow valley walled by steep, rocky mountains. The journey was a steady climb with an average grade of three per cent. and when the rack-and-pinion sections were reached, a maximum grade of eight per cent.

The road goes up the valley of the Aconcagua River, which rises in Mount Aconcagua. The stream is the colour of putty, and reminded me of the glacial streams of the Alps. It is fed by the glaciers of Aconcagua and is loaded with the earth-washings of the Andes. In places where the valley widens there are irrigated patches with little fields of alfalfa, barley, and beans. Now and then we passed a straw-thatched mud hut. Wherever there was room a handful of such huts formed a village. The people generally live by tilling the small patches of land near their homes. Some of the fields are not bigger than city lots, nevertheless, there are often horses and cattle feeding upon them, and on single farms I saw crops of corn and barley besides the pastures.

I saw a grain field where the farmers were preparing for threshing. They had spread the sheaves of wheat inside a ring of hard ground and near by stood a half-dozen horses waiting to be driven over the straw to tread out the grain. A little farther on I saw another threshing floor surrounded by posts and wire fencing. One cowboy

stood in the centre of the ring and two others at the side, each with a long whip in his hand. They kept twenty horses on a dead gallop round and round the ring. After a time the horses were driven out and the straw and chaff were thrown up against the wind to be blown away. The grain fell to the ground and was scooped into bags for the market. Then another carpet of sheaves was laid on the threshing floor, and the process repeated. Some of our manufacturers of harvesting machines have made small threshers for use in the mountains, which are being introduced in these highlands.

As we climbed up the Andes we could see the old trail, still used for crossing the continent. We passed trains of donkeys loaded with freight, pack mules taking merchandise from one side of the range to the other, and drovers, with cattle and horses, making their slow way over the heights. The mountain road is longer than the railway route, but freight rates are so high that the mule trains still handle much of the traffic.

The highest point on the trail is twelve thousand six hundred and five feet, or a little higher than the top of Fujiyama, Japan. It goes over the Uspallata Pass two thousand feet above the railroad tunnel, the altitude of which is over ten thousand feet, or nearly two miles above the level of the sea. The boundary line between Chile and Argentina crosses the tunnel, so I went from one republic to the other in darkness.

The scenery on this route over the Andes is similar to that of the Rockies along the Denver and Rio Grande railroad. The rock formations are strange and varied and at some points have as many colours as the Colorado canyon. One goes through mighty gorges, or passes

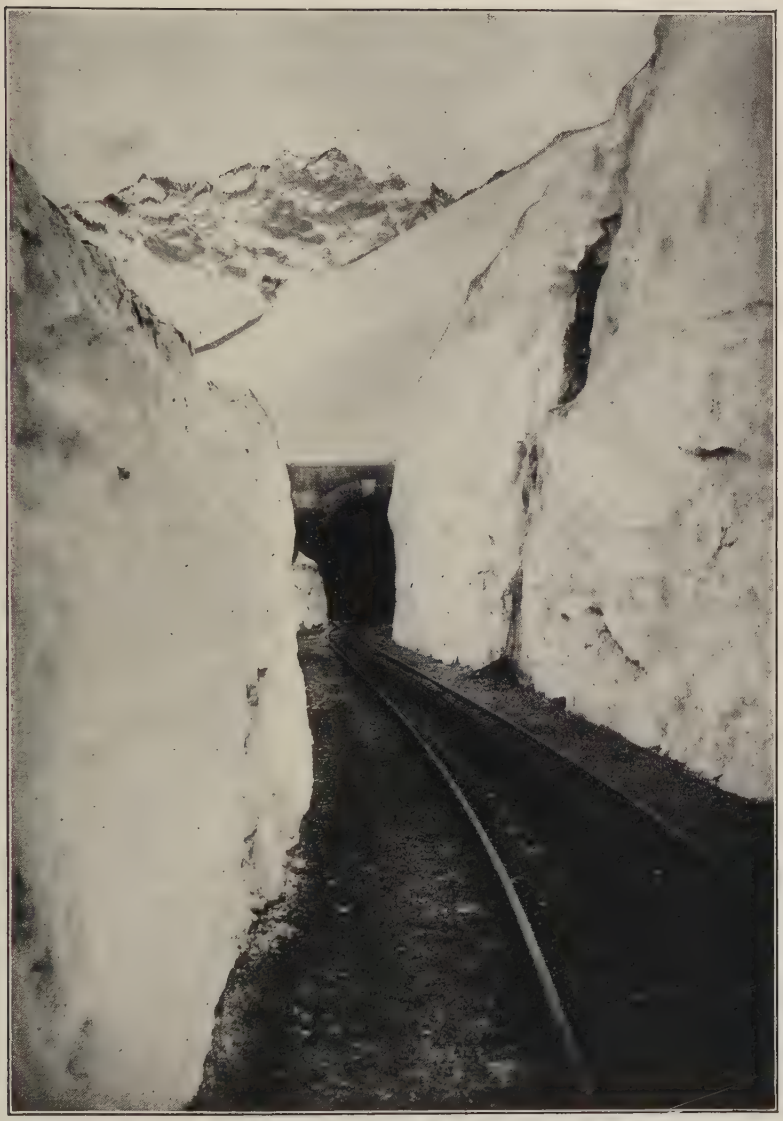
under rocks hanging mountain-high overhead, and suddenly comes out upon beautiful lakes sparkling like polished silver in the clear mountain air.

There is little vegetation on the Pacific side of the slope. The chief plants are the cacti peculiar to this region. Among them is the giant cactus brandishing its spines from ten to twelve feet in length. These plants resemble somewhat the organ cactus of Mexico and Arizona. On many of them I saw what I thought were their bright red blossoms, but I found they were flowering parasites, common to the highlands of this part of the world.

A little farther up the mountains the cacti disappeared. The earth showed that it had some moisture and we saw low bushes bearing yellow and blue flowers. Higher still it was again dry, the bushes vanished, and we came into canyons and hills of volcanic rock, changing colour with the sun and the shade. On one side of the canyon the rocks were bright yellow, on the other they were gray, turning to opal tints in the shadows.

At Rio Blanco, on the Chilean side, we reached the cog railroad and went on by a series of jerks, a jerk for each cog in the track. The steepest part of the road over the mountains is a narrow-gauge line one hundred and eleven miles long, with twenty-five miles of cog system. The rails weigh about fifty pounds to the yard and the ties are of quebracho, from a tree native to lower South America, the wood of which is one of the hardest and toughest known. The powerful engines, made by Kitson and Company, of Leeds, England, were built especially for climbing the mountains. The locomotives are double, with a rack-and-pinion device at the front.

All the Transandine trains have first- and second-class



The Andean boundary between Chile and Argentina is crossed through a two-mile tunnel, ten thousand feet above the sea, the entrances to which, during our mid-summer, are frequently blocked by snow.

The river-built land of the Mendoza valley is so well suited to grapes that it is practically all one vast vineyard, producing something like seventy-five million gallons of wine every year.

cars. My fellow-passengers of the first class were chiefly business men and clerks. Nearly every one wore a duster, but this was to avoid the dirt of the lowlands rather than that of the mountains. A large part of the Argentine pampas is covered with sand, and the trip across them is one of the dustiest in the world. In the second-class cars were chiefly Chilean peasants.

I saw constant evidence of the enormous cost of the construction and maintenance of the Transandine Railway. We passed many gangs repairing the road-bed, and everywhere the track has to be watched for dirt slides such as have caused so much trouble at Panama. In winter there is also danger from avalanches, although the higher sections are protected by snow sheds. In some years as much as fifty thousand dollars has been spent for snow protection. Chile and Argentina jointly furnish the labourers, each for its own part of the lines. The high officials of the road and the engineers are Englishmen. The conductors are natives.

Our first station in the Argentine Republic was Las Cuevas, at the eastern end of the tunnel, and the first official I met was a guard of the Argentine frontier. The next was the customs officer who came into the cars to examine our baggage. He was lenient and gave us no trouble whatever.

The scenery of the Argentine Andes is less rugged than that on the Chilean side. The way at first is through a desert and the tops of the mountains are rocky and barren. Soon after leaving Las Cuevas, I caught sight of Mt. Aconcagua about fifteen miles away. Its peak is an irregular mass of snow, with jagged black rock reaching from the snow line down to the rocky valley. The sum-

mit is almost twenty-three thousand feet above the sea, the highest peak of the New World. Some distance to the southward in plain sight is Mt. Tupangato, twenty-two thousand feet high, far higher than any mountain on our continent.

All the way down the Andes we were in sight of magnificent peaks. We passed the famous Inca Bridge, a natural bridge of limestone, and crossed the narrow pass of Uspallata. On the Chilean side we had followed the valley of the swift-flowing Aconcagua River. On the Argentine side we descended toward the Atlantic along another glacial stream that raged and foamed over the rocks. This river, the Mendoza, waters the fruit-growing oasis in the desert at the foot of the Argentine Andes. It carries down great masses of silt which feed tens of millions of grape-vines and countless fruit trees and gardens. It is the mother of the city of Mendoza, having built up about that town some of the most valuable soil in the world.

William Wheelwright planned a railway to cross the mountains from Caldera on the Pacific to Rosario on the Rio de la Plata, several hundred miles from its mouth, but it never reached the mountains. The present road originated with two brothers, Juan and Mateo Clark. They began building on both the Chilean and Argentine sides about 1889. The work went slowly until about 1899, when construction stopped. The track had been laid as far as the beginning of the tunnel on each side of the Andes. The engineers seemed afraid of the tunnel and money could not be raised to continue the work until W. R. Grace and Company of New York took the contract and began to bore in from both sides of the mountain.

Late in 1910 the two gangs of workmen came together. The engineers had planned so accurately that for some time the workmen in Chile could hear the workmen in Argentina digging at the thin veil of rock that was left. Then a final charge of dynamite was set off, the two tunnels were joined, and the mountains were conquered.

The tunnel is practically two miles long and all the way lies through rock. At the very top of the pass, two thousand feet above the tunnel, stands the famous "Christ of the Andes." One of the beautiful statues of the world, there is none that compares with it in the nobility of the sentiment it stands for. "The Christ of the Andes" is a greater monument of civilization than the famous Peace Palace at The Hague, or that other Peace Palace erected by Mr. Carnegie in Costa Rica and thrown down by an earthquake.

The statue is a bronze figure of the Christ cast from old Argentine cannon. It was placed on the boundary between Chile and Argentina to commemorate the treaty made between the two republics in 1903. It marks the settlement of a dispute that involved a territory as large as our state of Kansas, or more than one-third as large as either Germany or France. The figure is twenty-six feet high and stands on a granite pedestal. One hand of the Christ is outstretched in blessing and the other upholds the cross. On the pedestal are engraved in Spanish these words:

> Sooner shall these mountains crumble into dust than the people of Argentina and Chile break the peace which they have sworn to maintain at the feet of Christ, the Redeemer.

Many Europeans, and Americans, too, are inclined to

regard the countries of lower South America as a part of the backwoods of the world, and are prone to sneer at their lack of culture and morals. After the horrors of the World War, when organized murder became a national virtue and written obligations between governments merely scraps of paper, it revives one's faith to recall "The Christ of the Andes."

Coming down from the height of the Andes on the Argentine side, the railroad follows the silt-laden Mendoza River, which, like the Nile, brings food and drink to the lands that it irrigates.

Besides her vast expanses of good lands, Argentina has an equable climate permitting cattle to feed out of doors the year round, which makes for lower costs in her production of beef for the world's markets.

## CHAPTER XX

### A VINEYARD OASIS

THE city of Mendoza is an oasis of vineyards in the heart of a desert. Lying here at the foot of the lofty Andes Mountains, on the railway that crosses the continent from the Pacific to the Atlantic, it is the centre of the great valley of the Mendoza River.

The river is not beautiful, although here and there willow trees line its course. It narrows and widens, passing in and out among mighty boulders, always carrying the silt that is like so much gold dust to the Mendoza fruit grower. The water is the colour of chocolate and as thick as pea soup. It is so loaded with silt that wherever it meets an obstruction it builds up a sand-bar or an island, and if one can find a patch of stones over which the current can be turned, he can soon have a covering of the richest soil. There are many such islands in the river and they frequently change the course of the stream.

The eastern foothills of the Andes have so little rain that most of the land is a desert. For this reason, all of the available water of the Mendoza is used for irrigation. There are frequent dams to divert the stream over the fields, while now and then there are canals with many laterals. The water gives life to all the land that it touches. It regenerates the valley year after year, as the Nile does Egypt, permitting enormous crops to be produced without nitrates or phosphates.

The river-built land is so well suited to grapes that the whole valley has been turned into vineyards. Farther back in the country are hundreds of thousands of acres devoted to grazing; but here every square yard is in grapes, producing something like seventy-five million gallons of wine every year. As vineyards in bearing are worth three thousand gold dollars and upward an acre, the bare lands with the water rights will bring as much as one thousand dollars per acre.

I saw one little vineyard of seventy acres that nets eight thousand dollars a year. The owner told me the average vineyard pays all expenses and gives fifteen per cent. of clear profit year in and year out. When the season is good and grapes are high it yields more, but when the bad seasons come the profits are still sufficient to make the average fifteen per cent.

Vast quantities of grapes are turned into wine. The town-dwelling Argentineans are a wine-drinking people, though the country people drink more *maté*, which is much like tea. The natives of Spanish descent habitually take wine with their meals. The immigrants, who have come in by the millions and form perhaps one half of the population, are mainly Italians and Spaniards, and they also drink wine every day. All the small Italian farmers have their own wine supply and everyone who can afford it lays in a stock for his use each season.

Most of these farmers buy upon credit, as is the custom in our Southern states, paying their bills when the crops are sold. If the yield promises to be good they have little difficulty in getting all the food, seeds, and farm implements they want. But for one thing the merchants will not give credit. That is wine. The wine is bought

and sold only for cash, even at retail. Whenever times are hard in the cities the wine sales fall off and the price of grapes in the vineyard provinces drops, sometimes to one cent a pound.

And just here I would say that this little valley promises to become, like the central valley of Chile, another winter fruit garden for our North American cities. Mendoza is already sending grapes to the Atlantic seaboard and thence to New York. The fruit goes in refrigerator cars and steamers. It is carried from here to Buenos Aires, a distance as far as from New York to Detroit, or it might be shipped over the mountains to Valparaiso, and thence go north in the fast ships through the Panama Canal.

The grapes here are equal to the finest from Spain or California. They can be landed in perfect condition and delivered in the chief cities of the United States in the very heart of our winter, for while blizzards are raging among the skyscrapers of New York the orchards of Mendoza are loaded with fruit.

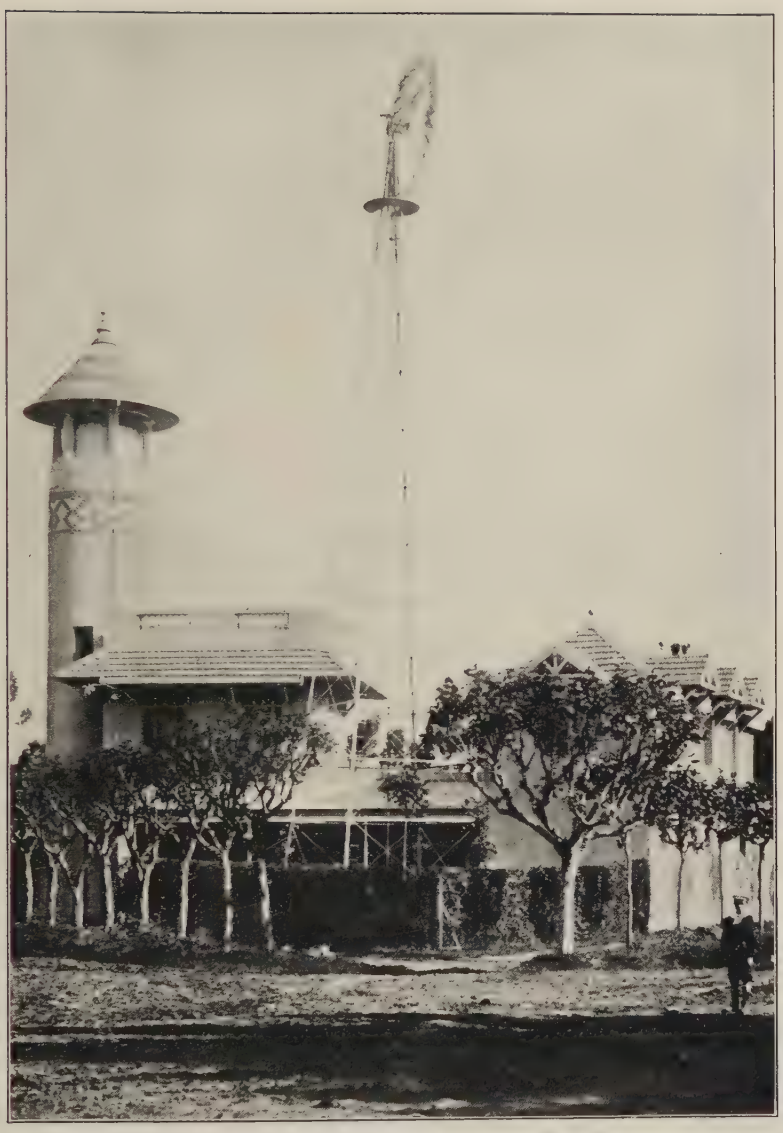
But let me give some idea of this wonderful valley of which I am writing. In Mendoza I am in the centre of a million acres of vineyards. The vines grow close to the city and enormous vineyards are separated from its buildings only by mud walls four or five feet in height. We can take a belt line and ride around the town, going all the way through vineyards and nothing but vineyards. This morning I spent two hours riding through this enormous fruit garden. The grapevines lining both sides of the track are set out in orderly rows sometimes half a mile long, with black earth and irrigation ditches between the rows. The vines are cut back every year, as

in France, and their tops are only waist-high from the ground. They are trained upon wires tacked to rough posts and the grapes hang down in great clusters. I saw vineyards of a thousand acres entirely filled with white grapes, and other tracts equally large where all the grapes were blue or purple. They are quite as big as damson plums, single bunches weighing four or five pounds.

The trimming of these vineyards is so carefully done that the whole area looks like an ornamental garden, and the ground is so thoroughly cultivated that not a weed is to be seen. The labourers are mainly Chileans and Argentineans, although many Italians and Spaniards come in to help harvest the crop. The wine grapes are left on the vines until they are dead ripe, when they are at their sweetest and just ready to be turned into wine.

I saw many of the large *bodegas*, or wine-making establishments. Nearly all of them have their own vineyards, but they also buy grapes of the growers near them. Some of the *bodegas* are of vast extent, with buildings that cover acres; others are small. The presses of Mendoza province alone make about three hundred million quarts of wine a year, and the adjoining province of San Juan produces about one fifth as much. These two provinces spell "Wine" to every Argentinean, and one of the common sayings describes a person manifestly under the influence of alcohol as *entre San Juan y Mendoza*, (between San Juan and Mendoza). The capital invested in vineyards and *bodegas* runs high into the millions of dollars, and is spread over an area of more than a quarter of a million acres of land.

I have just visited a *bodega* said to be the largest wine press of the world. In its cellars are forty-one com-



Windmills from the United States have become a conspicuous feature of the sky-line in the Pampas, which extend for miles and miles as level as the sea, with only occasional signs of human habitation.

The Argentine "troje," or corn crib, is made of corn stalks so woven around a framework of poles as to protect the grain stored inside. Argentina is the world's chief corn exporter.

partments for storing and aging wine. In its fermenting rooms there are twenty vats, each holding one hundred thousand gallons, and smaller vats with a total capacity of more than a million. In addition to the four to five hundred vats, there are even more tanks, the whole forming reservoirs that could hold more than two million gallons at one time. This *bodega* has one hundred and eighty-two cars for bringing the grapes from the vineyards to the winery and ninety-three tank cars of twenty-five hundred gallons each to transport the wine and the grape juice from other *bodegas*. The capital of this institution is three million dollars, on which it is said to pay dividends of twelve per cent. besides laying away a big surplus.

The grapes come in by the carload and first pass through crushing machines. The pulp is then run through four-inch pipes to the fermenting vats and the juice goes through cellar after cellar and from vat to vat in its fermentation. It is stored in tuns as tall as a three-story house and also in tanks, each big enough to form a swimming pool for an elephant. The staves are several inches thick and bound with heavy hoops of steel. The tanks were all made in France.

Everything is of the most modern make. The machinery is operated by electricity and the barrels in which the wine is shipped are manufactured on the premises. As I went out I passed a tank mounted on a motor truck, used for carrying wine from the farm to the press. This tank on wheels held one thousand gallons.

The Mendoza River has created a forest in the midst of its garden of vineyards. The trees grow in the heart of the city itself. Water runs through all the streets of Mendoza, each of which is lined with poplars and other

shade trees. The city has five large plazas filled with palms and tropical vegetation. In the heart of the town is the Plaza of San Martín. This park consists of sunken gardens, triangular in shape, with raised walks running around and through them, on which the people take their evening promenade. But the citizens' chief pride is in West-Park which covers fifteen hundred acres on a shelf of land a little higher than that on which the city stands. It contains a sheet of water almost a mile long, where regattas are held. Electric-lighted avenues are lined with magnificent trees and at frequent intervals are gardens of shrubs and plants. It has also a botanical garden and a zoological exhibit.

From the hills two miles away there looks down over the park and the city the "Army of the Andes," one of the world's most imposing memorials. This is the colossal heroic group carved from the granite of the mountain top to commemorate one of the great feats of military history, the passage of the Andes by the army of San Martín during the wars for South American independence. The four thousand men he had been drilling for five years in Mendoza were divided into two detachments. One of these went by the Uspallata Pass, over the Cumbre, twelve thousand eight hundred feet above the sea, and the other took the much longer and colder though not so lofty route over the pass of Los Putos north of Aconcagua. The daring manœuvre succeeded with the loss of only a few men, and resulted in a brilliant victory that broke the power of Spain in Chile and Peru.

I am delighted with Mendoza. It is one of the prettiest of South American cities and one of the newest and freshest in appearance, despite the fact that it is one of the oldest

cities of the continent. It was founded seventy-five years before Boston, and was a thriving municipality when New York was born. It was over three hundred years old when an earthquake destroyed it in 1861. The convulsion occurred while a large number of people were in the churches, and more than ten thousand were buried in the ruins of the falling buildings. This reduced the population to eight thousand, but Mendoza rapidly grew upon its ruins and now it has sixty-five or seventy thousand inhabitants.

The present-day city is made largely of materials taken from the ruins. On account of the earthquakes, the buildings are nearly all of one story, but they are large and their exteriors are decorated. Mendoza is noted for its colleges and normal schools. It has also a model kindergarten which stands in beautiful gardens with the Andes for a panoramic background.

The city is lighted by electricity and has electric cars. There are fine stores in the chief business section, but the smaller establishments make one think of the shops of southern Europe. Many of them are open at the front, the walls being used as show cases. The outside of one hat store is covered with hats, and a great tin hat, with an incandescent light globe hanging from the bottom of it, forms the sign over the front door. Many of the hat shops are not more than five or six feet wide. Some of the stores have realistic picture signs. A barber shop has over the door a painting of a barber at work, while a toy store has a picture of children buying doll babies, Noah's arks, and miniature automobiles.

Following a visitor's invariable custom, I went to the market. It was filled with vegetables and fruits. I saw

onions five inches in diameter, green peas as big as marbles, tomatoes the size of a pint cup, also roasting ears and lima beans. I found plums and apples, and figs, both blue and white. I saw grapes in bunches as big as my head and watermelons and muskmelons. Among the muskmelons is one like our casaba with a white pulp that is especially delicious, which weighs twenty or thirty pounds. As this melon is said to keep well, it may some day be among the fruits exported for our winter use. Another delicious fruit is the nectarine, with a skin as smooth as that of a plum but like a peach in its pulp and flavour.

## CHAPTER XXI

### ACROSS THE PAMPAS

FROM Mendoza, in the foothills of the Andes, to Buenos Aires on the east coast, I travelled for a day and a night over the pampas. My train, a fast express, carried me into the most thickly settled part of this mighty country.

Passing first through a region of vineyards, with grapevines extending on each side of the track as far as the eye could reach, we soon came to the edge of the desert, as indicated by the scrubby brush. Beyond the desert, which it took several hours to cross, we looked out upon vast plains covered with alfalfa knee-high. Herds of fat cattle were feeding in it. Bales of it, covered with canvas to keep off the rain, were piled high at the railroad stations.

The western part of the Argentine Republic is thinly settled, with villages far apart. The people we saw at the stations were like those of our western frontier. Many of them looked as though they had just come from the immigrant ships. I saw Spaniards and Italians by the score, and mixed with them *gauchos*, or Argentine cowboys. The men wore cotton caps and jackets and full trousers held up by belts or strings at the waist with the legs tied in at the ankles. Some of the men of the better class had on leggings or boots. The women wore bright-coloured calico dresses, with skirts that reached only to the tops of their shoes. Their heads were bare or covered

with shawls. They reminded me of the peasants of southeastern Europe.

Between stations we saw little but vast fields fenced with wire and spotted with large droves of stock. We often rode for miles without seeing any dwellings of the great landowners. Most of the farmhouses are low mud huts not more than twenty feet square. Some of the huts are roofed with galvanized iron and others with thatch. Among the newer homes many are of galvanized iron, not as good as the ordinary "tin" garage of our country. In most cases two or three rooms make up the whole house. None of the poorer huts have gardens. They are the homes of the Italian colonists who have come here to make money, and though some of them own large tracts of land, they live little better than hogs.

Passing out of the alfalfa country, we entered a region of pastures interspersed with fields of Indian corn. Some of the fields seemed almost boundless, the green reaching out like a mighty sea from each side of the track.

As I rode across the republic, I was impressed with its immensity. Often I could see nothing but the sky and the grass and the crops extending to the horizon. The sky hangs low. It is of a hot blue, with a few silvery, floating clouds. The fields stretch into hundreds of acres, and the rows of corn seem to merge with the sky. The corn is as luxuriant as that of Illinois or Missouri, and yields so lavishly that Argentina exports more corn than any other land in the world.

And then the great pasture lands. There are thousands of acres of pasture to every acre of corn. The grass goes on and on in all directions. At times I rode for an hour, seeing nothing but grass, grass, with vast flocks and herds

feeding upon it, and now and then some huts of the farmers or perhaps, on the skyline, the skeleton tower of a windmill of galvanized iron. Windmills are universal. They are needed to provide for watering the stock, and sometimes they are so numerous that you can see the curvature of the earth from the graduated heights of the mills rising over the land. They have a saucy look as they stand out so prominently on the pampas, making one think of a little girl's head, the wheel forming the face and the rudder the little tail of tightly braided hair sticking out behind. Many of these windmills are of American makes. Indeed, I am told that American agricultural machinery is supreme in Argentine markets.

After riding for hours through these pastures we entered a region of wheat and corn. The immensity was just as impressive. I saw many American threshers at work. They stood beside stacks often several hundred feet long which looked like mighty yellow windrows. The grain is bagged as it comes from the threshing machine. On the roads I saw long teams of oxen bringing the fat bags to the train. At some of the stations were warehouses of galvanized iron for storing the grain and at others, canvas-covered mountains of bags standing near the tracks.

As we entered eastern Argentina the signs of careful cultivation increased. There were many fine buildings, the homes of the rich *estancieros*, but the homes of the common people were just as mean and squalid as those farther west. Some of the landed estates are enormous and many contain tens of thousands of acres. One of the most noted is La Pastoral, which covers thirty-seven thousand acres. Fifteen thousand head of Durhams and Herefords feed upon it. Another farm has

seventy-five thousand acres, with twenty-five thousand head of stock, and the San Jacinta farm includes within its fences sixty thousand acres, of which only seven hundred are devoted to grain. The rest is in pasture.

Argentina, the richest and most enterprising of the South American republics, is fast taking its place among the great powers of the world. Besides its average good lands, it has some of the finest soils upon earth. It has long been feeding John Bull and is now reaching up along our side of the Atlantic to feed Uncle Sam. The Britisher has Argentine steaks and chops every morning, while already steamers leave Buenos Aires loaded with beef and mutton for the tables of New York. The country is sending butter abroad and may soon be adding to our supplies of flour and Indian corn.

Indeed, the food lands of the Argentine are enormous almost beyond conception, rivalling our own in agricultural production. Argentina is much smaller than the United States, but it has fewer waste lands and better climatic conditions. Cattle and horses can feed out of doors all the year round, while the summers are hot enough to raise corn. Corn and hogs form the greatest possibilities of the future. Though the grain lands are annually producing exports to the value of more than a quarter of a billion dollars, they are only at the beginning of their development.

The Jockey Club of Buenos Aires is the richest association of its kind in the world and in the private concourse at its track are seen the elect of the Republic.

The Chaco is a wilderness of swamps, plains, and forests, in the northern tropical frontier land of Argentina. Here is obtained the quebracho wood exported to the United States for its tannin.

## CHAPTER XXII

### ARGENTINA AND THE UNITED STATES COMPARED

WE HAVE often seen Argentina on the map, but maps are lifeless things and it takes a geographer to show just what they mean. Let us see if we cannot make this country more real by comparing it with ours.

In the first place, Argentina is about one third as large as the United States, but it has no great mountain chains to eat up its good lands, and its desert area is small in comparison with ours. If you could cut the Argentine into patchwork and fit the pieces upon our territory, they would cover every inch of land east of the Mississippi and the remainder would be larger than a number of the states west of that river. Argentina is twelve times as big as Great Britain and five times as large as either Germany or France. It is greater than Mississippi, Louisiana, Texas, New Mexico, Arizona, California, Utah, Colorado, and Kansas combined. It would make twenty states as big as Illinois and the greater part of them would be equally as rich.

Argentina and the United States both lie in the Temperate Zone, although one is far north and the other far south of the Equator. At noon in America one's shadow falls toward the north; here it falls toward the south. Our cold lands are in the far north; the cold lands of Argentina are in the far south. We go to Florida and the

West Indies in January to warm our chilled bones; for the same reason the Argentinean goes to Paraguay and Brazil in July. In Buenos Aires, January is midsummer and August midwinter. In the United States you must have a southern exposure to get the sun during the cold weather; in the Argentine Republic you want windows facing the north.

Both Argentina and the United States are agricultural empires with their chief crops about the same. Each has some of the best bread lands of the globe; both raise millions of live stock. These two countries produce enormous quantities of grain; both export food to the rest of the world. They are already competitors in the selling of meat, wheat, flour, and wool.

We, however, have been growing so fast that we are turning from farming to manufacturing. As most of our good land is already under cultivation, in the future we may have to look to Argentina to fill our bread baskets. Argentina already stands sixth among the world's wheat producers. Its annual crop is well over one hundred million bushels, but this comes from only one fifth of the territory upon which wheat can be grown. If all its wheat lands were in use, even with the present poor methods of farming, it would yield from eight hundred million to one billion bushels of wheat every year. Then it could supply all the flour we use and have several hundred million bushels to spare.

As I have said, Argentina is already the chief corn exporting country of the world. It produces something like two hundred million bushels a year and exports at least eighty per cent. of it. Our corn is nearly all used at home. The Argentine has hardly begun to develop its

corn lands. The whole northern part of the republic will raise maize and the pork industry could also be tremendously increased. An expert in that business has given the opinion that Argentina and Uruguay should become the greatest pig producers of the world; but so long as cereals continue profitable, Argentine farmers will take no pains to develop a new industry.

In addition to wheat and corn, Argentina is exporting oats. She also raises vast quantities of flax, for linseed; in fact, she practically supplies the world with linseed. She ranks second among the sheep countries of the world, falling only a little behind Australia, is fourth in the number of her cattle, and has more horses in proportion to her area than any other land upon earth. The horses bred here are among the finest known.

The crops come from the central and northern parts of the republic and are grown in the beds of rich soil built up by the wonderful system of streams emptying into the Rio de la Plata. In South America four great rivers form the chief drainage system for much of the land south of the Amazon valley. These are the Parana and Paraguay, which cover a great part of Brazil, the Pilcomayo, which drains the slopes of the Bolivian Andes, and the Uruguay, which drains the state of that name and much of southern Brazil. Each of these rivers is rich with silt, and for ages has been carrying down the plant food from the highlands. These streams drain a country larger than the basin of the Mississippi, in fact, half as large as the United States. It is this drainage that has made fat the Argentine pampas.

The best lands lie along the rivers, but the soil is rich all the way to the Andes and so free from rocks that there

are tracts over which one can travel for a hundred miles without finding pebbles enough for a game of jackstones.

Many sections of Argentina have their counterpart in the United States. In general, the basin of the Rio de la Plata is like that of the Mississippi. One must, however, cut out the great fields of maize in our corn belt and cover the land with pastures and grain. He must take away forty-nine farmhouses out of every fifty and tear down the barns. He must replace our neat country homes with mean huts of mud thatched with straw or sheds of galvanized iron, and erect here and there groups of large low buildings surrounded by flowers and trees, for the homes of the rich. Add then sheep and cattle feeding on the vast fields in flocks of thousands and one will have some idea of the broad lands of the Argentine.

In the northern part of the republic the scenery changes. There are more corn fields and great plantations of sugar cane. This region is warmer, like Florida or other parts of our far South. The province of Tucumán has soil which produces a hundred bushels of corn to the acre and yields all the sugar consumed in the Argentine Republic. It has tropical trees and plants, and pastures devoted to cattle and horses. Still farther north is a region called the Chaco, which is covered with forests interspersed with pastures. This is the tropic frontier of the Argentine. Much of it is still unexplored and little of it has been developed.

To the south of the great pampas, which fill central Argentina, lies what was long known as Patagonia, a tableland much like northern Nebraska. This country is semi-arid, with a great deal of sand. The streams cut their way through the crumbling soil, and the plains are

covered only with brush and a thin growth of grass. Still, the vegetation is sufficient for sheep, and wherever water can be provided for the land it produces like the irrigated sections of our far West. All of the river valleys are being settled and the government is encouraging colonization, especially in the valleys of the Colorado and Negro rivers.

With these pictures in mind, we can more readily, perhaps, understand the reasons for much that we shall see in the great capital city and elsewhere in Argentina.

## CHAPTER XXIII

### BUENOS AIRES

BUENOS AIRES is Argentina much more completely than Paris is France. Paris is by no means France industrially; but Buenos Aires is not only the political, financial, social, and intellectual capital of the Argentine, but also her commercial and industrial capital. There is a saying that when Buenos Aires takes snuff, all Argentina sneezes. Argentineans, in fact, know only two places—Buenos Aires and the Campo. Buenos Aires is the capital city; the Campo is all outside of the capital.

The literal meaning of Buenos Aires is "good airs," yet in early days the death-rate of the town belied it. Though modern sanitation has changed all that, there was a time when lockjaw was so prevalent that it was caught merely by taking a breath of air. That picturesque cutthroat, Mendoza, was the city's sponsor, and named it for his patron saint, the Virgin Maria de Buenos Aires.

The Virgin's city is now growing faster than any city on the globe. In 1898 its population was eight hundred thousand. It has now more than double this number and is increasing at the rate of one hundred thousand a year. Already Buenos Aires is neck and neck with Philadelphia. It will eventually surpass Chicago and become second only to New York among the great cities of the New World.

It is wonderful how the town is increasing its area. It has spread out till it covers twice that of Paris and three times that of Berlin. The houses are low and cover much ground. The city is fifteen miles wide and twenty-five miles long. A motor trip around town is likely to eat up as much gasoline as the ride from Washington to Baltimore.

In the early days of the city's existence everyone, even the beggars, went about on horseback. Each beggar was required to carry a placard tied to his saddle giving his number. One traveller records that he counted eighty-five such mounted and placarded beggars in one trip through the streets. On my first visit the town swarmed with carriages. Now the chug, chug, of the motor cycle is heard day and night, while the motor cars double in number every two years. There are something like seven thousand motor taxicabs, which charge about half the rates of New York or Chicago. Many of the taxis are of French makes, but more and more American cars are being used. They go like the wind and seem to know no speed limit. They all keep to the left instead of the right and appear to fly around corners without regard to the traffic.

Buenos Aires has a good street-car system. Its surface tracks, joined end to end, would reach as far as from Washington to New York, and its subways are the finest ever constructed. Take, for instance, the tube railway under the Avenida de Mayo from the Great Western station to the capitol building. It makes the underground roads of old London look like dungeon tunnels. The cars, wider than those of New York, are walled on each side with plate glass and artistically lighted. The stations have walls of tiles with a different colour for each station. The

advertisements are so framed that they give no offence to the eye. The fare is four and a half cents

The subways belong to a British corporation. They were built by excavating the streets from above and shutting off the traffic for two blocks at a time while the concrete construction was put in. The first subway cost thirty million dollars. Since then others have been built, including freight subways by which cargoes are carried under the chief business sections to the docks.

The city cuts new streets just as, many years ago, Alexander, the Czar of the Russians, laid out the trunk line from Moscow to Petrograd. His civil engineers showed him a snake track taking in all the towns. Alexander laid a ruler on the map and drew a straight line from one city to the other. "There is the route for my road," said he. It is just so that Buenos Aires was rebuilt. The old streets were widened, and the new ones cut right through the heart of the costliest properties. The only question was what was best for the city, the extra cost being a mere matter of bonded indebtedness to be paid in the future. Before opening a new street the city bought property on both sides, so that the increased values made some of the biggest improvements pay for themselves. This was specially true on the Avenida de Mayo, the land for which cost five million dollars, although the street is not more than one mile long.

The plans were based on faith in a great future city. The water works were designed for a city of five or six millions and involved an expenditure close upon fifty millions in gold. The plant covers more than fifty acres and the water passes through seven filters before reaching the houses.

For three hundred years Buenos Aires was a Spanish city and every fine house had its patio and iron-barred windows. With its enormous growth and the lavish scale of rebuilding it now is more like Paris or Berlin.

The subways of Buenos Aires, the "city of good airs," are considered the finest ever constructed. They are owned by a British corporation and include a system for transporting freight.

The main artery of the city is the Avenida de Mayo, with the Plaza de Mayo at one end and the national Capitol at the other. Besides the streets, the town has ninety-seven plazas, promenades, and parks. Palermo Park is one of the fine parks of the world and the automobile throng which goes through its principal roads upon Sundays compares with that of the Prater on the edge of Vienna. Many streets are paved with asphalt or with wooden blocks laid in cement.

The Avenida de Mayo was nothing a few years ago. It has now an almost even skyline of six-story palaces, with bay windows running from pavement to roof. At one end is the Plaza de Mayo, upon which face the house of the president, the Stock Exchange, and the famous cathedral. At the other end are the marble halls of the congress, which have cost so much that the people have dubbed them the "Palace of Gold." The avenue is more than one hundred feet wide. It is lined with trees, so that one looks down between rows of green to the great buildings at each end. Along this street are magnificent hotels and stores the peer of those of New York and Paris. There is a great variety in architecture. Much of the decoration is Grecian and the skill of the Italian craftsman is shown in the carvings.

The designing of new buildings has been greatly encouraged by the municipality. All plans have to be submitted to the city authorities. Those accepted enter a competitive class, the best plan of each year receiving a gold medal. The successful architect is thereby put at the head of his profession for the year to come. In addition, the municipality places a bronze plaque on the front of the prize building when erected, and exempts

it from the construction taxes that all others must pay.

The building regulations are strict. As no structure can be higher than the width of the street upon which it stands, the average business block is of five or six stories. The even skylines of the new streets give a most pleasing effect. These vast municipal expenditures have transformed Buenos Aires. Instead of seeming Spanish it is now like Berlin or Paris, and old landmarks have disappeared.

This is one of the oldest cities of the New World. It was begun two hundred years before there was a house on the site of Boston, and only forty-three years after Columbus discovered America. The first buildings were mud huts thatched with straw. Then a brick kiln was made and later tiles and bricks were imported from Spain. The early town was of Spanish architecture, which style prevailed for more than three hundred years. The buildings were chiefly of one story, built close to the sidewalk and around patios and courts. Behind their iron-barred windows, facing the streets, the señoritas sat and watched their lovers playing the "bear act," or, as it is sometimes called, "eating iron." The girls could admire their suitors and make eyes at them, but the bars were always between.

Now the patios are fast disappearing, plate glass windows have driven out the iron bars, and the señorita has become an up-to-date, twentieth-century maiden. Nevertheless, four fifths of the homes are still of one story, although there are streets lined with six-story palaces, and skyscrapers are going up facing some of the parks. Many people now live in apartments, while there are an increasing number of buildings with shops on the ground floor and apartments above.

The old city was crowded together without breathing spaces. The new has as large lungs as any municipality in Europe and everything has been done to add to its healthfulness. As a result the death rate has decreased.

Ninety-five per cent. of the factories of the country are in Buenos Aires, and the large volume of foreign trade passes through it. Its wholesale houses supply the entire republic. One of the great sights is the harbour, where there is more shipping business than at any place on our hemisphere outside New York. About fifty thousand vessels enter and leave Buenos Aires each year. There are more than thirty thousand coasting boats.

The city lies about two hundred miles from the open Atlantic, on the right bank of the Rio de la Plata, which is here over thirty miles wide. The great mass of silt brought down to the ocean by this river has required the building of docks and the deepening of the channel at a cost of many millions of dollars. A generation ago there was a great mud bar before Buenos Aires and the anchorage was almost twelve miles away. All goods had to be transferred to lighters or barges. Since then a channel has been excavated, great dock basins have been built at enormous expense, and ships can anchor almost in the heart of the metropolis.

The port has the finest cargo-handling facilities. There are single grain elevators with a capacity of a million bushels each, and granaries which will hold twice that much in sacks. There are huge flour mills, one of which cost three and a half million dollars. Along the Riachuelo River are the mammoth meat-packing plants, where thousands of cattle and sheep are frozen each day and shipped to the world's markets. The harbour machinery is

operated by electricity and electric lights enable the work to go on all night.

The lighting system is excellent. For years the city relied upon street lamps burning mare's grease. The chief avenues have now great Brush lights, artistically hung, and in places the posts are set along the centre of the streets to form islands of safety from the fast-flying automobiles. Most of the electricity is furnished by a company that pays dividends of twenty-five per cent. a year.

It costs something to run Buenos Aires. The annual municipal budget totals twenty-five million dollars and more, notwithstanding the fact that the national government pays for the police, fire brigade, schools, water supply, and drainage, as well as for the hospitals, workhouses, and some other charitable institutions. The city is governed by a council and mayor. It has a city hall, facing the Plaza de Mayo, whose surroundings are just about the same as those of the municipal buildings of New York and Chicago. I found people of every class hanging around, and saw no end of contractors and jobbers and men with axes to grind. I don't know about graft, but I am told it prevails here to as great an extent as in the worst of our American cities, some of the public buildings having cost so much that they ought to be plated with gold.

The mayor is appointed by the president of the Argentine Republic for a term of three years. The council is elected by such taxpayers as pay one hundred dollars or more per annum, while the only qualifications for a councilman is the payment of municipal taxes to the amount of five hundred dollars per year. The twenty-two councilmen, each elected for a term of four years, receive no pay.

The council makes all the tax laws, and passes upon all appropriations for city expense.

Taxes and license fees are heavier and more numerous than those of the United States even during the war period. Everything has to be stamped, and business documents must be written upon stamped paper. Every business pays a license, that of the banks running all the way up to thirty thousand dollars a year. Each profession pays a tax. Licenses of architects and surveyors cost fifty dollars each, dentists pay fifty dollars per annum, and photographers fifteen dollars and upward. Pawnbrokers pay twenty-five hundred dollars or more, and all wholesale and retail business houses are assessed from seventy-five to fifteen hundred dollars. There are also internal revenue taxes, import and export taxes; in fact, taxes upon everything and for everything under the sun.

## CHAPTER XXIV

### HIGH LIFE IN THE CAPITAL

I KNOW all the great capitals of the world. I have walked the boulevards of Paris and mingled with the fashionable crowds along the Champs Élysées. I have made my way through Fleet Street to the Strand and feasted my eyes on the windows of Bond Street and Piccadilly. I have ridden in a jinrikisha through the Ginsa in Tokio, have been jolted in a cart along the ruts of the Tartar and Chinese parts of Pekin, and made my way on a donkey through the Moski in Cairo. I have shopped in Christian Street in Jerusalem, in the Street Called Straight in Damascus, in the dimly lighted avenues of Constantinople, and in the vaults of old Tunis. I am acquainted with the Corso in Rome, the Rialto of Venice, and Friedrichstrasse and Unter den Linden in Berlin.

They are all full of interest, but each has its rival in Florida Street in Buenos Aires. The Florida, as it is called, is the chief promenade, the chief shopping and gossiping place in this Paris of South America, and its scenes between five and six in the afternoon are different from those of any other great street of the world. At that hour the thoroughfare is filled with a moving mass of promenaders, made up of all classes and conditions of men.

While New York's Fifth Avenue shops are displaying the latest fall modes in furs and new creations in winter

hats, Miss Argentina's cheeks are rosy with the warmth of spring sunshine and the shops of the Florida are showing the latest confections in spring millinery and the smartest designs in summer gowns. Miss Argentina arrives in the shopping district in a luxurious automobile and, like her northern sister, proceeds from store to store, her chauffeur following his mistress as she progresses.

The fashions here, so American residents of Buenos Aires declare, are just two seasons ahead of New York. In the spring in Buenos Aires, they say, American women can buy hats, gowns, and shoes which they will find, on returning to the States six months later, just being displayed in the New York shops. Argentine women refuse to be behind any one in dress, and the Parisian style dictators, recognizing the opposition of the seasons, give them a six months' advantage.

The Florida is only thirty-five feet wide and less than a mile long. It leads from the Plaza de Mayo, where are the Government Palace, the Stock Exchange, and the Cathedral, to the Plaza San Martín, where are the most magnificent palaces, the Plaza Hotel, and the Jockey Club. It is lined with fine buildings all the way and its shops make one think of a mighty museum or a display of the treasure vaults of the world.

The roadway is paved with asphalt; the sidewalks are of tiles, like the floor of a bathroom. Everything is kept as clean as a new pin and the crowd fits the surroundings.

The Argentineans are a well-dressed people. Everyone spends as much on his clothes as his purse can afford, Many of the men are clad in the extreme of style, and young dandies stand on the sidewalks or stroll back and forth.

The women are of all classes; beautiful girls and sombre old maidens move along arm in arm. There are crowds of men. The young fellows are out to see the girls, and the girls are out to be seen.

There are many blondes, although brunettes are in the majority; and there are brunettes who would be blondes if the white powder they dust so freely over their faces could accomplish the feat.

Where are the carriages and automobiles? The Florida has none at this hour. Between five and eight o'clock the police shut off all wheeled traffic and the narrow street is given up to the promenaders.

Many of the people are shopping, and the stores are filled with customers. As I look at the signs I see that the big houses of London and Paris have branches here. Some of the shops are immense. Here is a jewellery store covering half an acre, and on the opposite side is a department store that would be large in New York. There are shops for women and shops for men, and great shops for children and babies.

Stop and listen to the people as they go by! The crowd is leisurely, and all have plenty of time. The language is polyglot. It makes you think of Babel at the time of the confusion of tongues, or of Pentecost, when the Apostles preached to men of different languages from all parts of the world. The bulk of this babel is Spanish, but mixed with it are Italian, French, German, and English.

In the throng are faces from every country of Europe. The mere number of people is enormous. The crowd is always on the move, and it goes on and on. It will keep going until about eight o'clock; then everybody will dis-

The wealth made in the "campo" is lavishly spent in the capital and its environs, where house parties of fifty people are not uncommon in the homes of the rich, some of them equipped with Roman magnificence.

Florida Street is the chief shopping and gossiping place in Buenos Aires. Between five and eight all wheeled traffic is shut off and it is filled with a brilliant throng of promenaders dressed in the latest styles from Paris and London.

appear, the shops will be shut, iron curtains will be drawn over the windows, and Florida Street will become only a well-lighted alley. It will be like a city of the dead until morning.

Money-making by day and display by night seems to be the motto of the people. The night life of Buenos Aires is confined to the avenues. The great white way is the Avenida de Mayo. This avenue is more than one hundred feet wide, with broad sidewalks, which from nine until midnight are covered with tables like those on the boulevards of Paris. Men, women, and children are walking about, or sitting at tables listening to the bands playing within the cafés.

Here is a beer garden, there a restaurant, farther on a vaudeville show, and there are moving-picture palaces without number. In the plazas at the ends of the street one may see children of three and four years out with their fathers and mothers as late as eleven o'clock at night. The whole city seems to move more rapidly as midnight approaches. Everything opens late, and the moving-picture shows do not close until midnight. The hotel dinner hours hardly begin until eight and the theatres are not opened until nine o'clock.

The street noises are many, and multiply as nightfall comes on. In the older parts of the city the roadways are so narrow that automobiles have just room to pass. The regulation that each vehicle must blow a horn at every street crossing keeps the air vibrating with a continual honking. Added to this is the sing-song cry of the newsboys, while in the early morning the peddlers and hucksters add to the din. So far, however, my sleeping has not been disturbed by the crowing of roosters, as in

Lima, La Paz, and Santiago de Chile. These people do not keep their chicken coops on their roofs.

Buenos Aires is a city of clubs. The Jockey Club and its world-famous clubhouse I shall describe later. In addition to the Jockey Club, there are many others. The Golf Club has grounds granted by the municipality. The eighteen-hole course covers many acres and measures over three miles.

Both men and women play golf, and many of the girls can swing a club lustily. There are also football teams. The Football Association has a membership of nearly thirty thousand players, of whom eighty per cent. are Argentineans. Football, introduced by the British, is played English fashion. At some of the matches as many as fifty thousand are present, and considerable betting goes on.

In the suburb of Buenos Aires known as the Tigre there are canoe and yachting clubs and boats representing seven or eight clubs compete in yacht races. The Tigre is one of the most interesting parts of Buenos Aires. It is built up on islands of the Rio de la Plata and accessible by train or by boat. The place is a combination of Bangkok and Venice, being full of winding canals lined with clubhouses and villas. Gardens border the edges of the canals and weeping willows bend over and trail their leaves in the water. There are scores of steam launches going in every direction, motor boats filled with children flying to and fro, and canoes gliding along, paddled by young men and women. The canoes are of brightly varnished hardwood, shining like gold under the sun. There are also many fruit vessels. Some of the islands are covered with orchards, and barges and boats loaded with peaches, vegetables, and green things creep through the waterways.

There is much gambling in the Tigre. At all the large clubs there are roulette tables and there are clubs devoted to gambling where the guests pay to be fleeced.

Buenos Aires has all sorts of theatres, from the Colon Opera House, one of the largest in the world, to cinematographs or moving-picture shows. The Colon seats thirty-seven hundred and has a stage fifty feet wide and sixty feet from floor to roof. At this theatre, which during the season is attended by the president of the republic and the high officials, evening dress is obligatory. The Odéon is devoted largely to comic operas, the Coliseo to lyric operas and operettas, while the San Martín has comedies and acrobatic shows. There are a dozen other theatres, including some where the plays are given in Italian.

There are five or six circuses and a vast number of moving-picture shows. At one of the theatres which has a stage that can be turned into a circus ring, there are dances, prize fights, and popular songs. There are also concerts of classical music and in the winter there is skating in the ice palaces day and evening. On the roof of the Casino is a popular roller-skating rink.

Buenos Aires spends millions of dollars a year upon her amusements. The boxes at the opera house cost a thousand pesos and upward a season, and a seat in the orchestra at a good show may cost from fifteen to twenty dollars in gold.

The scenes at an opera night are as brilliant as those of any theatre in Europe. Every person in the boxes and orchestra is in full dress and the gowns of the ladies are more costly than those at a White House reception. The dresses come chiefly from Paris, and as for jewels, I

venture to say there is a good half peck of diamonds scattered over the feminine part of the audience.

So much for entertainment. The city has its serious aspect as well. There are churches, charities, museums, libraries, schools, and newspapers. There is a great cathedral, which covers more than an acre, and will hold nine thousand people.

Buenos Aires is the largest Catholic city of the world. Ninety-six per cent. of the Argentineans are Roman Catholics. Protestants are freely tolerated, however, and there is a live, up-to-date Young Men's Christian Association. There is an American Methodist Church, attended by more English people than Americans I regret to say, and also a Church of England congregation.

The city has a library of two hundred thousand volumes, a National Museum of Fine Arts, a Natural History Museum, an Historical Museum, and many private collections of paintings.

There are hospitals of various kinds, including one for lunatics that has two thousand inmates, and another for infants, where mothers can bring their unwanted offspring and have them taken care of with no questions asked. In this foundling asylum foster mothers nurse the children, and the little ones are carefully reared.

An interesting feature of Buenos Aires is its great city of the dead, situated in the heart of the town. This is the Recoleta Cemetery, where the departed sleep in palaces. The place is divided into streets paved with cement blocks and faced with the homes of the dead, a house and lot for each family. The houses are little marble structures entered by doors of iron network through which can be seen the vaults and coffins within.

The main vaults are above, but there are other vaults below. In the centre at the back there is usually an altar decorated with lace and flowers. I spent an hour in the cemetery, walking through street after street. Some had crosses over the entrances and many had wonderful statues on each side of their doors.

The Recoleta Cemetery is beautifully planned. The streets radiate from a circular plaza like the spokes of a wheel. As I stood at the hub of this wheel I saw black-clad women walking up and down the avenues. Nearly all had flowers in their hands or servants with them carrying baskets of flowers. They were decorating the houses.

In addition to these private dwellings of the dead, there are others which might be called apartment houses. These are larger structures, each of which will hold from a dozen to fifteen bodies. There are also chapels as big as churches, with two stories of vaults beneath.

A single chapel may have room for fifteen hundred bodies. The vaults are finished in marble and are entered by wide marble steps from the interior of the chapel. For those who are so poor that they can command neither a private burial house nor a place in the chapel, there are tenement vaults, equipped with pigeonholes, which can be rented as homes for the dead. Each pigeonhole is about two feet square and deep enough to take in a coffin. These are arranged in blocks of five hundred. When a niche is filled it is walled up with a slab upon which may be placed a photograph of the deceased, covered with glass. Below this is a little shelf on which flowers or a burning oil lamp may stand.

The funeral processions differ from ours. At funerals of the well-to-do a landau with glass sides goes in advance of

the hearse. In this are piled the floral offerings. The hearse is drawn by four or six black horses; and on the box sit two men clad in liveries of black and silver and wearing cocked hats. It is open at the sides and consists of a canopy supported by four life-sized figures of Ethiopians carved out of ebony. It is decorated with six huge plumes made of black ostrich feathers. The coffin lies on a black cloth in which the initials of the dead are worked in silver.

According to law the funeral must be within twenty-four hours after death and is generally announced by newspaper advertisements such as the following:

GUILLERMO ARMADERO
Q. E. P. D.,
Died February 16, 1915.

His wife, Mariana V.; his children, Manuel Benedicta and Amanda; his mother, Francisca G. Lavelle; his father-in-law, Antonio P. Valdez; his brothers, Luis and Carlos; his sister, Maria; his brother-in-law, José; his grandchildren, uncles, nephews, cousins and other relatives invite you to accompany the remains of the deceased to the Recoleta Cemetery, Friday, the 17th, at 2:30 P. M.

In the Church of the Holy Cross a mass for the eternal repose of his soul will be sung from 7 to 10 A. M., the body being present. The family will take part in the one at 10 A. M.

The leave-taking of the deceased will be by card.

Invitation only.

The words "leave-taking will be by card" mean that the friends are not expected to condole with the family at the funeral, but that their cards will be taken by the servant in black livery, who may stand near the grave, or that they can be left at the house or at the church. An acknowledgment of such a card is usually made by the family, often expressed by the single word "*Agradecido*," which means: "I thank you for your sympathy."

# CHAPTER XXV

## WITH THE WORKERS

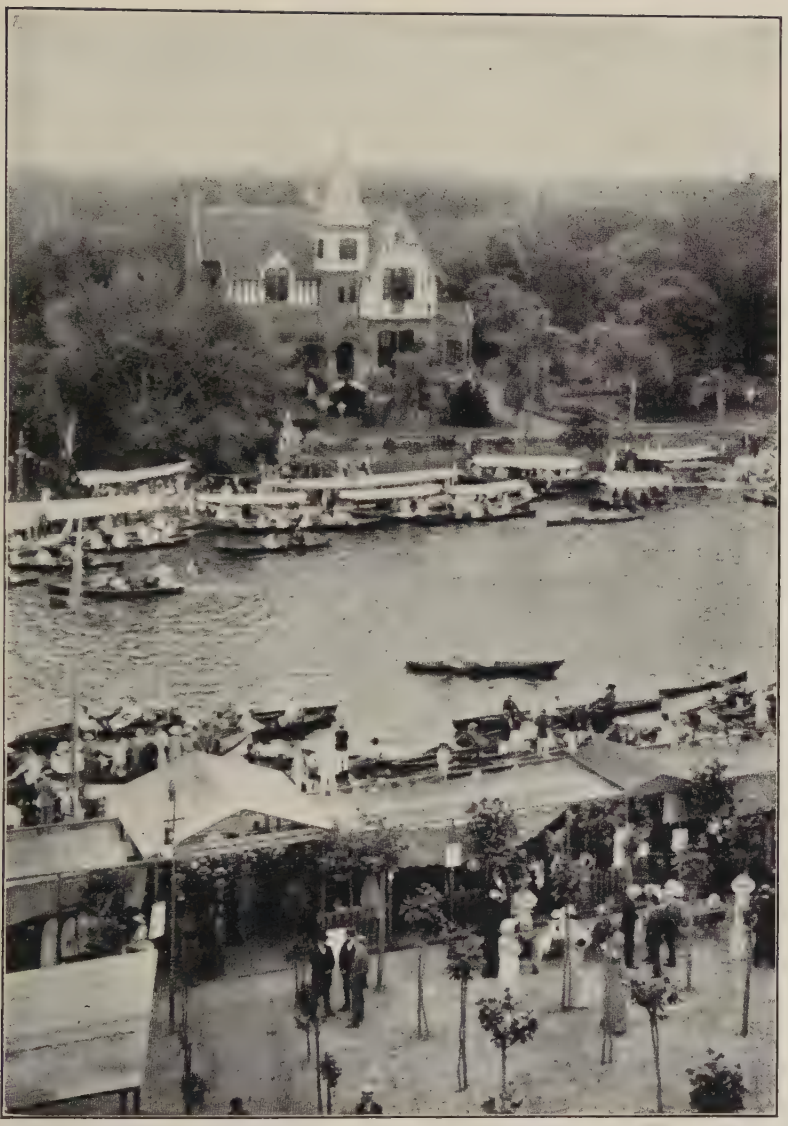
IT IS a mistake to suppose that the Argentine population is wholly made up of land barons and cattle kings. It has also tens of thousands of labourers, thousands of small farmers, and millions who have never had a silver spoon in their mouths. The people are largely of foreign birth, fully one fourth of the whole population being composed of Italian peasants who have come here to settle, or as "swallow immigrants." In addition, there are hundreds of thousands of Spaniards, Russians, Austrians, and Syrians. Then there is the large class of poor Argentineans serving as cowboys on great estates and living from hand to mouth. They dwell in mud huts, cook their mutton and beef over the coals, and, like as not, sleep on the floor, which in many a home is the bare ground.

Buenos Aires contains some of the most sumptuous palaces of this hemisphere. It has a costly Capitol and long avenues lined with magnificent buildings. Upon its streets one sees the best-dressed men and women on earth. But there is another side to the picture. The city of palaces is also a city of hovels, a city of warrens. The outskirts are peppered with sheet-iron shacks and mushroom one-story boxes standing out on the plain without regard to order or sightliness. The suburbs are the meanest I have seen anywhere, and the city has places

where people are crowded together as in the slums of New York and London.

The tenement sections are made up largely of *conventillos*, immense buildings of one or two stories set up along narrow passages or around small courts. Each *conventillo* contains scores upon scores of tiny, one-roomed homes. A single room may be the dwelling-place of one or more families, and in some cases it is so small that the washing and cooking have to be done outside in the court. Many of them have but one bed, occupied perhaps by the parents, while the rest of the family sleep on the floor. There are no means of heating such dwellings, which look more like caves than homes of twentieth-century human beings.

Many buildings of this character were wiped out by the new street improvements, but others still lie in the shadows of the great stores and fine public buildings. I visited one the other day. It was not far from the Grand Opera House, where the charge for a seat in the pit is enough to feed a poor family two weeks. This *conventillo* was a two-story building surrounding a court about six feet in width and two hundred feet long. The walls (running the length of the court) were so close together that the stone flagging was perceptibly wet, and I could feel the dampness through the soles of my shoes. Galleries along the outside of the second stories half shaded the court, projecting over the apartments below. I peered into some of the rooms, each of which held a family. They were about twelve feet square and their only light and ventilation came from a door in the centre. Just outside each room, in the court, was a bowl or box of charcoal, the cook stove of the family within. Some of the



El Tigre is a combination of Bangkok and Venice, being built upon islands and full of winding canals. The waterways are lined with the houses of the clubs which compete here in annual regattas, and casinos where those who wish may gamble.

While primarily an agricultural country, Argentina has some fifty thousand factories, ninety-five per cent. of which are in Buenos Aires, where an industrial school has been established with courses in various trades.

bowls were alight, and pots of steaming soup rested upon them. Here they were broiling meat over the coals; there they were cooking macaroni; farther on they were stewing or boiling. The people were mostly Italians. Many of the women were young and there were girl mothers of fourteen and fifteen, washing and cooking while their babies sprawled on the stones. The families in the second stories did their cooking on the galleries about the court.

There were swarms of children of all ages and sizes, from infants in arms to half-grown men and women. Notwithstanding their surroundings, they seemed happy and healthy. The climate here is good, and the mortality rate of Buenos Aires compares favourably with that of other great cities. When I first came here it was thirty-three for every thousand people. Now it is less than that of Liverpool or Manchester, and much lower than that of Madrid. The death-rate is about fifteen per thousand, whereas that of London is eighteen, of Paris the same, and of Madrid more than twenty-seven. New York is the healthiest of the large cities, having had a death-rate as low as eleven per thousand in recent years.

In this court big families were the rule. Some had as many as ten children. Children and babies and parents and grown-up sons and daughters may all sleep together in one of these tiny hovels. The birth-rate is large, that of the Italians being about fifty per cent. higher than the average birth-rate of Europe.

Food prices are high, but the markets are good and vegetables and fruits cost less than in the United States. Most families buy their bread, which the poor have no facilities for baking. Bakers are licensed and carry the bread from house to house. But little cornmeal is used.

Many onions are eaten, and a frequent sight is the onion peddler going about with long strings of onions over his shoulders. Beef is sold by the kilo of two and one fifth pounds, and many other things are sold the same way. Milk is sold by the litre, as are wine and kerosene oil.

The people live simply, the average Argentine family either in the cities or out on the farm spending much less for its food than a family of the same class in the United States. Many people eat but one hearty meal a day, and that in the evening after they have stopped work. They have only a cup of tea, or tea and a piece of dry bread, upon rising, with perhaps another cup of tea and bread at noon. If they are Italians or Spaniards they may take wine instead of tea; but if they are Argentineans they will begin the morning with a cup of *maté*, the Paraguayan tea.

The Italians are welcomed as immigrants when they come to stay. Most of them come from the farms of Lombardy, and are good agriculturists, not afraid to work, and thrifty. Many of them send a large proportion of their savings back to Italy. Where they rent farms they live meanly, saving their money to buy land, and adding to their possessions until they finally accumulate considerable holdings. The large numbers who come without expecting to stay—the "swallow immigrants," whom I have mentioned—are usually good workers but they carry home to Italy nearly all they earn.

The poor Argentineans restrict their labour largely to the ranches and to the live-stock industry, serving as cowboys, or *gauchos*. They like to work with cattle, and before the era of fences began they herded the stock on horseback. They are poor mechanics, leaving most of

such work and hard manual labour to be done by foreigners. The Italians and Spaniards have built the railroads, and are the masons, carpenters, and mechanics of Buenos Aires. They are good workmen, and their wages are less than those for similar labour in the United States.

Of late years labour organizations have grown in number and power; but they are still political machines rather than trades unions proper. They have no sick funds or benevolent features, and strikes are generally short. Most employers prefer to have work done by contract, particularly in harbour improvements and public works generally, where excavations can be done by the yard. The contractor hires his gang of men and is responsible for the work. Such contractors often have stores and furnish food for the men. There are also stores on the large *estancias*, where goods are furnished to the hands and their value deducted from the pay envelopes.

The wages of farm hands change with the season. A man may pay fifty cents a day for seeding and three times as much for harvesting and thrashing. The pay is higher on the farms near the cities, but in the back provinces they have been sometimes as low as twenty-five cents a day. They always go up at harvest time.

Every large estate has lodging places for its hired men and a common eating-house. Tenant houses and also mud huts and iron sheds are scattered over the farms. The chief food furnished on the big *estancias* is meat. I know of a man who has one hundred employees. He kills one steer and two young sheep a day. The steer usually weighs about six hundred pounds, and the two sheep one hundred and fifty pounds. This means that he furnishes meat to the amount of seven hundred and

fifty pounds live weight per day for one hundred people. The *gauchos* have grown up on it. When one of them takes a trip he usually carries his food with him in the shape of raw meat. When he grows hungry he makes a fire and cooks some, keeping the balance for the next meal.

As to women's work in Argentina, sentiment is beginning to change. A few years ago a woman could hardly go alone through the streets of Buenos Aires without running the risk of insult. A girl was not supposed to go out without a companion and it was thought improper for girls to hold clerical positions or to act as typists, stenographers, or clerks. To-day many of the best business establishments of Buenos Aires employ women. The largest department store here does a business of over seventeen million dollars a year, and pays out several million dollars in salaries, and of its three thousand employees, six hundred and fifty are women. It has seventeen women among its commercial travellers.

There are a number of women operators employed by the telephone company, but they are not "hello" girls. The Argentinean does not understand the word "hello." When he calls up central he shouts "Oila" to get the operator's attention, and then asks her to have the courtesy to connect him with his butcher, baker, or candlestick-maker.

The most respectable profession for young women in Argentina is school-teaching. This is due to the introduction of American schoolmarms. A generation or more ago, during the presidency of Sarmiento, the first female school-teacher was appointed. Sarmiento had been minister to the United States and while there he met

Horace Mann, who interested him in our system of education. After Sarmiento became president of the republic he introduced our educational system. He sent to the United States for a large number of American women teachers and established normal schools and other schools throughout the republic. They did so well that other Yankee girls came, with the result that school-teaching became popular with the native women. Many girls of good families have made teaching their profession and there are now in the republic seventeen normal schools for women alone. There is also a vocational school where girls are taught glove-making, embroidery, needlework, and artistic decoration. There are two cooking schools for women in Buenos Aires, one of them supported by the city.

## CHAPTER XXVI

### THE GOVERNMENT OF THE REPUBLIC

DURING my stay here I have met the president of the Argentine Republic. The ruling powers of Argentina are splendidly housed. The great Government Palace facing the waterfront at the lower end of the Plaza de Mayo covers more than two acres. It is four hundred feet long and two hundred and fifty feet wide, one of the largest buildings on the South American continent. The Pink House, as it is called, is of brick covered with stucco, and its old-rose colour reminds one of the great Winter Palace at Petrograd on the banks of the Neva. In size as well as in colour it is in striking contrast to our White House in Washington. It has three stories and its surroundings, including the many attendants in uniform, are more elaborate and ornate than those about our president.

I have had interviews with the leading officials of the government from the president down, discussing with them the present and future conditions of their country and its relations with the United States. As might be expected, their hope and pride in the land are unbounded, and the most casual visitor sees grounds for their great expectations.

On the question of rivalry with the United States the men in official life are very diplomatic and declare that the feeling between the two nations is of the friendliest

possible nature. They say that Argentina has enormous resources and is growing so fast that it has no time to be jealous of any one. It is well satisfied with its place in the sun, as well as with what the good Lord has given it in the way of resources. My next inquiry brought up a question often asked by North Americans: Will there ever be a United States of South America or a union of the South American republics? The men in public life generally answer "No," and appear to think such a union not only improbable, but undesirable. As they say, Argentina is just beginning to grow, and will continue to multiply in population and wealth for generations to come.

The country could easily support ten times its present population, and would then have fewer people than the United States has now. I asked whether the country might not be Italianized by the great immigration from Europe, but the heads of the state insisted that the Argentinean of the future will be much the same as the citizens of to-day. They say that there is so much land that the republic can assimilate immigrants for a long time to come.

After my interview at the Pink House I took a taxicab, and, for about thirty-five cents of our money, motored through the wide Avenida de Mayo, the Pennsylvania Avenue of Buenos Aires, to the Capitol, where Congress meets. This building is one of the world's most imposing structures. It stands facing a magnificent plaza which was carved out of the business part of the city. For this park four blocks of buildings were torn down and the ground was built up and covered with grass, trees, and shrubs. Fine statues were erected, fountains were placed, and other decorative work was done at a total cost of five million dollars.

The great marble building facing this plaza reminds one a little of our Capitol at Washington. It has four stories, and from its centre rises a dome which weighs thirty thousand pounds. This rests upon pillars of white granite, but it was necessary also to construct an inverted dome beneath in order to provide adequate support. The architecture is Græco-Roman in style. The centre is semi-circular, with a wing on each side and a projecting pavilion at each corner. The Capitol contains the national halls of the House of Deputies and the Senate, the secretaries' offices, the committee rooms, and a library. The furnishings are magnificent.

This building is like the State House of Pennsylvania and the Capitol building at Albany in its scandalous extravagance. The original estimates were six million pesos, but the cost was more than five times that sum. Over and above this, fabulous sums were spent for decoration and furniture. No one knows where much of the money went.

The Congress of the Argentine Republic sits from May first to September thirtieth. The House sits Mondays, Wednesdays, and Fridays, and the Senate on the other days of the week. The Congress is similar to ours in its organization. The Senate has thirty members, two from the capital and two from each province, elected by a special body of electors in the capital, and by the legislatures in the provinces. The House of Representatives consists of one hundred and twenty deputies, elected by the people. By the constitution there must be one deputy for every thirty-three thousand inhabitants. The deputies are elected for four years, but one half go out every two years. A deputy must be at least twenty-five years of age and have been for four years a citizen.

Concentration of most of the lands in the hands of large holders makes conditions difficult for the ambitious immigrant. The living standards of both tenant farmer and homesteader are much lower than in the United States.

The estanciero furnishes his employees generous rations of raw meat which they carry with them when working far afield and cook in the open.

The Avenida de Mayo is the Fifth Avenue and the Pennsylvania Avenue of Buenos Aires. It is a splendid thoroughfare a mile and a half long, at the end of which rises the great dome of the national Capitol.

The senators must be not under thirty years of age, and must have been citizens for six years. They are elected for terms of nine instead of six years, as with us. Both senators and deputies receive salaries of seventy-five hundred dollars a year. The president gets an annual salary of about forty-two thousand dollars of our money and has, in addition, about thirteen thousand dollars for his official expenses. The vice-president has a salary of about sixteen thousand dollars, with ten thousand five hundred dollars for official expenses. Each of the eight cabinet officers gets about sixteen thousand dollars per annum.

There are property qualifications for all congressmen, and a senator must have an income of at least eight hundred dollars a year. All money appropriations must originate in the House of Deputies, and only the deputies have a voice in fixing taxation.

In addition to the national government, the republic has state governments and legislatures such as we have. Each of the fourteen provinces elects its own governor, parliament, and judges, and each has its own constitution, courts, and laws, but such laws must not conflict with the national laws.

As far as individual rights are concerned, there are liberty and equality, and before the law the foreigner has the same rights as a citizen. There are no titles of nobility, property is inviolable, and the state sees that the father provides for his children. In our country a man can make a will giving his possessions to whomsoever or whatsoever he pleases, and cut off his daughter or son with a nickel. In Argentina the laws provide that a father must leave his children at least four fifths of his fortune, while a husband, if he has no children, has to leave at

least half of his property to his wife. An unmarried son is compelled to leave his parents two thirds of his property, and only unmarried persons without parents or other legal heirs can make wills disposing of their possessions wholly as they see fit.

The government has a national council of education. Primary education is free and compulsory for all children of from six to fourteen years of age. About two thirds of those of school age are in attendance. There are twenty-five thousand teachers in the primary and secondary schools, with a million or more pupils attending them. There are forty-two national colleges, with some ten thousand students. There are national universities at Córdoba, Buenos Aires, La Plata, Rosario, Corrientes, and Tucumán. The university at Córdoba is one of the oldest in the New World. It was founded in 1613, antedating Harvard by twenty-three years and the first charter of William and Mary by eighty years. There are also schools and colleges for women and a large number of the teachers are women.

The country has five hundred and twenty newspapers, of which more than four hundred are in the Spanish language. There are four newspapers published in Italian, five in English, five in German, and others in Scandinavian.

Buenos Aires has an up-to-date press. There are humorous papers with striking cartoons and illustrated journals that compare favourably with those of the United States. There are also great dailies with telegraphic dispatches from all parts of the world. *La Prensa* and *La Nación*, published regularly for more than half a century, have always held high rank for their in-

dependent criticisms and their excellent news service. Buenos Aires has two English dailies. One is the *Standard* founded in 1861 by the Mulhalls, the well-known statisticians, and the other is the Buenos Aires *Herald*. Both are enterprising, the *Herald* being especially noted for its agricultural and stock-breeding news.

I have gone through several of the newspaper offices. That of *La Prensa* is famous the world over. It stands on the Avenida de Mayo in the very heart of the city. The building is of white stone, five stories high, with a golden bronze figure of Fame rising eighteen feet above the top of its tower. The interior is palatial. There are a festival hall, four halls for public gatherings, and quarters for the entertainment of distinguished visitors to Buenos Aires, consisting of a drawing room, dining room, and smoking and billiard rooms, with dressing rooms attached. The paper maintains a free public library, and has a medical department, where doctors and specialists treat without charge all who will come. There is also a legal department, where any one who wishes may have the advice of a reputable lawyer as to his business or personal rights, as well as a chemical laboratory devoted to experimental, agricultural, and industrial uses. The paper issues daily weather reports from its own observatory. It has a school of music, where the best vocal and instrumental instructors train without charge those who show signs of talent.

The *Prensa* is beyond doubt one of the great newspapers of to-day. It is at the head of its class in all South America. Its circulation often runs to several hundred thousand copies daily, and it consumes white paper amounting to thirty-five tons every twenty-four hours.

Its plant is run by electricity generated in its own building.

I have been interested in the advertisements of this paper, and in its charges, which vary according to the character and purse of the advertiser. For instance, an employer advertising for a servant pays thirty cents a line, while the servant advertising for a situation is charged only ten cents a line. A doctor who wants patients must pay two dollars a line, while the poor girl out of a job gets the same space for her "situation-wanted-female" notice for ten cents. The *Prensa* contains each month about sixty thousand small advertisements; and every day there are from sixteen to twenty pages of official, professional, or auction advertisements and other announcements. Its telegraphic tolls are close to a thousand dollars a day, while its annual fees to correspondents run high into the thousands.

## CHAPTER XXVII

### SETTLERS AND SWALLOWS

IMMIGRATION into Argentina was greatly changed by the World War. There has been an increase in the number of Germans and Poles and natives of every class from Austria, Hungary, and the Balkan States. Until 1914, the bulk of the immigration was Latin. The Italians began to arrive about sixty years ago, and for a long time came at the rate of from fifty to one hundred thousand per annum. The Spanish immigrants have been numerous, and the Italians and Spaniards furnished about two thirds of the new blood of the nation. Even now one fifth of the population is Italian and after them come the Spaniards. There are many Russians, as well as Syrians and Armenians. The immigrants from North America total only a few hundred a year.

The government has erected big hotels at Buenos Aires, Rosario, and at Bahía Blanca, where the immigrants are lodged until they can be sent to their new homes. The Immigrant Hotel at Buenos Aires is one of the sights of the city. Standing on the banks of the Rio de la Plata, within a stone's throw of the docks where the immigrants step off the steamer, its surroundings must make them think they have dropped down into fairyland. The buildings face a beautiful park, filled with flowers, tropical trees, and playing fountains. The hotel covers an acre or more and is a big brick building of four stories. Adjoining

are other buildings containing hospitals and offices. The ground floor is paved with tiles, and its walls are panelled with glazed tiles to the height of your head. Everything is as white as fresh snow. The second floor has dormitories so large that they can accommodate eight thousand nightly. The beds are mattresses of canvas, slung in berths like those of a sleeping car, and so arranged that they can be cleaned every day. The rooms are disinfected and absolutely free from vermin.

I went through the great dining room and watched about eight hundred men and women eating their dinner. The tables for the men were at one end of the room, those for the women at the other. The men kept their hats on and many of the women had shawls wrapped around their heads. Their clothes were as motley as those of a market crowd in some out-of-the-way corner of Europe. Not a few of the immigrants were fine-looking and all seemed to be happy.

From the dining room I went to the kitchen, a huge room walled and floored with tiles. The cooking is done by electricity, mainly in great round boilers, each of which holds over one hundred gallons. The boilers have nickel-plated lids and are of snow-white enamel, like a bath-tub. They are kept at just the right temperature by steam pipes. I tasted some of the soup and liked it.

Later I attended a lecture and moving-picture show given for the immigrants to help them to choose their homes. The pictures were farming scenes displaying the resources of Argentina and showing how the various crops are raised. Activities in many different provinces were shown on the screen, and we had views of grape-growing

in Mendoza, sugar-planting in Tucumán, and corn-harvesting in Entre Rios. The immigrants were intensely interested.

The hotel has a large employment bureau for the hiring out of immigrants under contracts that fix their wages and terms of service. Any infringement of contract by the employer is prosecuted by the government without expense to the labourer.

An interesting section of this employment bureau is that devoted to placing the women as house servants. The housekeeper in need of a servant comes to the Immigrant Hotel to look over the women and girls ready to go out into service. She picks out the one whom she likes, and, if the two parties agree, the contract is made out. A ticket is then given which permits the servant to leave the building with her employer. But the contract is kept at the hotel and in case of trouble the matter can be brought into court. Connected with this department are three policemen detailed to follow the girls and inspect the houses to which they are taken. There is every protection against white slavery, for the government tries to act as the guardian of its new children.

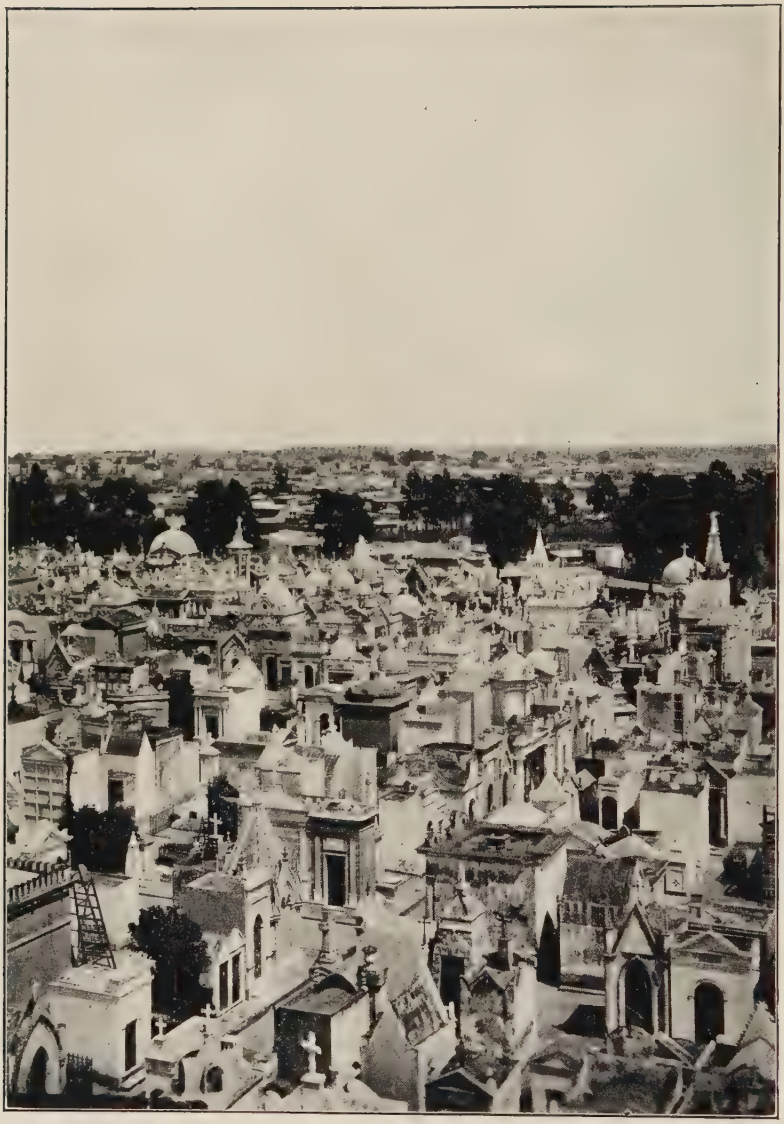
Complete records are kept of the newcomers. Their photographs, measurements, and thumb prints are taken, and one copy of each record is filed in the hotel, while another is sent to the police station nearest to the immigrant's place of settlement. No one is allowed to land if he is more than sixty years of age and has no relative who will be responsible for his care. All are examined as to possible disease, and the physically defective are returned to the port whence they came. The immigrants have the right to remain five days in the hotel and some of the

interior cities have arrangements for keeping them pending employment.

Many foreigners who come to Argentina have no idea of making this country their permanent home. They come to work for a year or so, expecting to go back with what they have saved. Some stay only for a season. This is true of thousands from northern Italy and northern Spain, countries whose seasons are just the opposite of those of Argentina. When it is winter in northern Italy the men can aid in harvesting the crops here in Argentina and go back home for their spring ploughing. The wages are so much higher that they can pay their steamer fares and still make money on the trip. There are something like forty or fifty thousand immigrants who return every year. Some have saved enough to buy land at home. The Italian's great desire is to own a little farm in Italy. The result is that he begrudges every penny spent away from his native land, cuts his expenses to the bare necessities of life, and returns in about the same clothing that he wore upon his arrival. When he has saved two or three hundred dollars he is ready to go back and take the money with him.

These men carry millions of dollars out of the country. They are known as "swallow immigrants," for they flit back and forth like migratory birds. They do not confine themselves to Argentina. Some stop first in Brazil to aid in harvesting the coffee crop, and thence move on to Uruguay and Argentina. These "swallows" are so numerous that the steamship companies make a great deal carrying them back and forth. The total fares from these passengers amount to something like thirty-five million dollars per annum, and this traffic is said to give the

The marble Hall of Congress in Buenos Aires reminds Americans of their own Capitol at Washington. Its cost, as with many of our public buildings, vastly exceeded the estimates, five million dollars being spent on the plaza alone.



In the Recoleta Cemetery, the dead sleep in little marble palaces. It is divided into paved streets lined with the homes of the departed, a house and a lot for each rich family and humbler, more congested quarters for the poor.

steamship owners a profit of about twenty-five million dollars.

In spite of the "swallows," the bulk of the immigrants become permanent residents. The population of Argentina, which is over eight and one half million, has been largely built up by immigration. But it is a fact regretted by many Argentineans that the paternal care extended to the immigrant is limited to the poorest class of day labourers. They may be called "Colonists," but the real colonist, who becomes at once a part of the country by taking up land of his own, is rare. It is the fault of the large owners who, in turning to agriculture, have tried to be farmers without doing any work, or absentee landlords, who do not allow their tenants any sure tenure or proper equipment to make the land profitable. The native well-to-do Argentinean secretly despises the man who works with his hands. He wishes to own a great estate, and buys on a cash or credit basis all the land he can get, depending on the foreigners to do the labour and build up the country. He is willing to trust to the unearned increment or rise in the value of land for his profit.

I do not believe that Argentina is a good place for the American farmer. If a number of our people would club together and bring their families, establishing large colonies, they might make congenial social conditions for themselves. But the domestic and social life of the Italians and Spaniards is not suited to Americans, and the difficulties of mastering the language are a great drawback.

The Italian or Spaniard will put up with all sorts of hardships. His ordinary home is a mud hut and his

whole family is crowded into one or two rooms. Often the house has no windows, and a small opening in the side walls with a board shutter gives the only light. The lamp may be a bottle of oil with a hole through the cork and a few threads of cotton for a wick. Frequently the cooking is done over an open fire on the ground, with the kettle hung from a tripod made of three sticks of wood.

The European immigrant expects his whole family to help him. Men, women, and children go out together to plough and to reap, working from daylight till dark, and later still when the moon shines. Many settlers start with farms on shares; but some rent lands for a fixed sum. A few work for wages, which, as I have said, are far lower than in the United States, except in harvesting time.

One of the chief troubles of the settler is the land-holding system. Most of the country is divided into very large tracts. There are over a hundred men, each of whom owns nearly two hundred thousand acres or more. There are nearly two hundred who possess from fifty to one hundred thousand each, while a thousand and more hold from twelve to twenty-four thousand acres. At least fifty thousand persons own from two hundred to eight hundred acres, and the holdings are so close together that it is almost impossible to build up a population of small farmers. Only by dividing the big estates could satisfactory social conditions be created, and the pride and conservatism of the owners make that possibility remote. The government is doing what it can to encourage subdivision, and a few *estancieros* have sold lands to the immigrants, but the majority of the great estates remain intact.

The best of the lands have gone into the hands of rich

Argentineans and foreigners. The total area of the republic is about seven hundred and thirty million acres, of which perhaps half is fitted for agriculture and grazing. The rest is mountain and desert, a great deal of which can never be used. The greater part of this belongs to the government, the public lands including altogether about two hundred million acres, three fourths of which are in Patagonia. These lands are mainly arid, but there are some rivers running through them that may be used for irrigation. There are also public lands in the north, but they are covered with woods and must be cleared before being farmed. Some of the government lands have been granted to colonies, which are being encouraged. Land is allotted to companies that undertake to bring in settlers; grazing tracts are sold at low prices in parcels of six thousand acres. Government lands may also be leased, and certain provisions are made for stocking them.

There are a large number of colonies in Argentina, some of which are very old. There are German, Russian, Swiss, Austrian, Italian, and Spanish settlements. In Chubut there are several Welsh colonies, and there is one of Finns. There is also a colony made up of Boers from South Africa.

Among the most interesting of such settlements are those belonging to Hebrews. Baron Hirsch, who gave ten million dollars to assist the Jews to leave Russia, sent agents to Argentina where they bought a tract of good bottom land, comprising about thirty million acres. For this they paid something like twelve or fifteen thousand dollars per square league, the total sum expended amounting to more than two million dollars. The Jewish Colonization Fund has aided this work, and there are now about

forty thousand Jews in Argentina. Some of them are settled in villages and own large areas of farming lands near by. They have built up communities from which they go out to work on the farms. Many of them own their lands in severalty, and some of the villages have three or four thousand population. Not a few have established stores in different parts of Argentina, so that there are now Jewish merchants everywhere. The grain trade is largely controlled by them. They have shown the same business shrewdness that is common to their race the world over.

My inquiries concerning lands and their values lead me to conclude that the prices vary quite as much as they do in the United States, and are subject to the same fluctuations. In 1885 one could buy real estate in the heart of Buenos Aires for less than a dollar a square yard, while in the same locality, thirty years later, one would have had to pay a thousand dollars a square yard. Farming lands to be had for a song a half century ago bring a half million dollars a square league to-day. This is especially true in the province of Buenos Aires.

Land here is usually sold by the hectare, equal to two and one half acres. The price depends largely on the character of the land and upon its location. The soil varies as much as it does in the United States and some public lands, sold at auction, bring as low as sixteen cents an acre; whereas, if near streams or railroad stations, they may sell for several dollars per acre. Argentina's first need is the growth of a class of small farmers who own the land they work and realize that their success and their country's progress are bound up together.

## CHAPTER XXVIII

### OUR OPPORTUNITY IN ARGENTINA

THE Argentine markets offer great opportunities to the capitalists, manufacturers, and business men of the United States. The World War threw it wide open, and offered us advantages that may not come again in a century. Until that time the big things of this part of the world went into European hands. The foreign trade of Argentina, exports and imports, now amounts to some two billion dollars per annum and she ranks second in our hemisphere as the best market for foreign goods. Her purchases far surpass those of any other South American country, for her people are among the most lavish spenders of the whole world.

Figures give but little idea of the wealth of this great republic and what it offers to our foreign trade. The Argentine stands tenth among all the countries on earth in the average possessions of its inhabitants. Family for family, it has a purchasing power far greater than that of Norway or France, and ten times that of Japan.

There are sixty million acres of land in cultivation. The implements for planting and harvesting them all come from abroad. Argentina is not a manufacturing country. The land is generally flat; the streams are sluggish and there is little water power. Most of the coal is imported. These conditions are all obstacles to industrial growth,

With the rapid development of her natural resources, which have already produced enormous wealth, Argentina has been and will long continue to be one of the very best markets for the United States and other industrial nations. European countries have been the largest buyers of her products, and she has likewise bought most of her manufactured goods from the other side of the Atlantic. Even though American manufacturers find the Argentine their best South American customer, they have had only a small slice of her trade. During the war, of course, American goods had the advantage, but with the resumption of European production, and the rise of unfavourable conditions of exchange, American exporters encountered again the keenest kind of competition.

Some American specialties, such as agricultural implements and machinery—the Chicago windmills I saw scattered over the plains, for instance—have long had a strong hold on the Argentine market. American moving-picture films are very popular in all the cities. American goods generally are well liked in Argentina, but we have been lacking here, as elsewhere, in the faculty of accommodation. We have not catered to customers with tastes differing from our own, nor adapted our business ways to their forms of procedure; but there is no reason why we should not successfully compete with other nations in almost any branch of trade. Argentine business men are as keen and as bustling as ourselves, though they still cover those qualities with more polite forms of speech and manner, and will not permit their establishments to be used as mere dumping grounds for the excess production of our manufacturing plants.

We have made a good beginning in selling coal to

Argentina, and the long-standing prejudice against the output of our mines seems to have been overcome. The price of fuel from abroad rose to exorbitant levels during the war when there was such a scarcity that some of the factories and mills stopped running and the railroads reduced their passenger service. The coal used here is bituminous, and has been coming largely from England and Australia. Argentina will always be a customer for coal or some other kind of fuel, and in the future the United States ought to have a larger share of this trade. Some oil has been found and production is increasing, but the country as a whole is still largely dependent upon imported coal. Nature seems to have fixed her field of activity in agriculture and stock raising, and so lavishly is she endowed in these directions that she has no need to seek other sources of profit.

With the high cost of fuel and lack of skilled artisans she cannot produce shoes of good quality though she has a superabundance of leather. She is a great wool-grower, but she cannot manufacture woollen goods as well or as cheaply as she can import them. Her immigrants are nearly all farm labourers and not trained in industry.

Though the country affords a big opportunity for the sale of motor cars and all sorts of vehicles, there are local reasons why the motor trade will probably grow slowly. The roads are poor and unlike ours in many ways. They are usually four to five times as wide as our roads, because the huge grain wagons, carrying eight or ten tons, often have two or even three dozen horses hitched to them, sometimes ten abreast. A country road is more like a narrow ploughed field than anything else. Few road-scrapers are used, and such heavy loads produce holes

deeper than those in our worst highways. So long as the huge carts are used the roads must be wide, and so long as they are wide it is almost impossible to improve them up to the standards necessary for motor-car use.

The large land holdings, which are a disadvantage to the country in a general sense, are also a drawback in the special development of motor sales. The rich *estancieros* are good customers, but their number is limited, while their tenants, or "colonists," cannot afford the luxury of automobiles. They continue to live by the standards of the ox-cart period. There are sections around some of the larger cities which have improved highways, but each is isolated from the others and the Argentinean of wealth never thinks of touring through his country.

These conditions produce some unusual factors in the demand for American cars. The Argentinean living in the country wants a special model. To suit him its tread must be several inches broader than the American standard, and he wants the steering wheel on the right side because the rules of driving are the opposite of those in the United States. The American manufacturer can produce special models only at much higher costs, because such specialized production throws his factory arrangements out of gear. Hence it would seem necessary for American dealers to stimulate educational campaigns for improved roads on which the standard tread would be satisfactory. On the other hand, the American method of establishing service stations in connection with sales agencies and the availability of standardized parts are proving a great help in the sale of our cars.

Another hindrance to increased use of automobiles is the excessive price of gasoline. The crude native oils

Argentina, like the United States, has been largely populated by immigrants, mostly Italians and Spaniards. For temporary care of the new arrivals the government built great hotels at Buenos Aires and other ports.

From the receiving station in Buenos Aires immigrants are sent to their places of employment which the government helps them to get. Many are "swallows" who will work in Argentina only for a season and then return home with their savings.

A housekeeper in Buenos Aires can go to the government immigrant station and select a cook. The authorities keep a copy of the contract between mistress and maid and even send inspectors to examine their places of employment.

do not furnish good gasoline, so practically all of it has to be imported. Here the American motor engines compare unfavourably with the European. The latter is of small capacity but high efficiency, developed to meet the limited supply of gasoline with which Europe has long contended.

Though the introduction of motor trucks and tractors has lagged far behind touring cars, it will surely increase in the future. Argentina is improving its roads, and Buenos Aires has plans for new streets that will cost two hundred million dollars before they are completed. At present Buenos Aires does not use as many motor trucks as any American city one tenth its size.

Argentina offers a rich field for planting American dollars. The British, Germans, French, Spaniards, and Italians have long known this and invested their money at the capital and throughout the republic. The British are said to own about two thousand million dollars' worth of property of one kind or another in Argentina, including most of the railroads. They have taken the bulk of the private loans, and look with jealous eyes upon the public loans placed in the United States. Argentina is rich in resources, but she needs money from the outside. She is in about the same position that we were a generation ago, in that she needs millions for public works of all kinds. Among the big things under way are the paving of Buenos Aires and the improvement of the harbour and docks, while the extension of all sorts of public utilities creates a constant demand for machinery and supplies.

There is much land improvement going on; irrigation schemes are projected which require a great deal of capital. In the valley of the Rio Negro is a project for the redemp-

tion of three hundred thousand acres of desert, while there are other plans for dyking and draining the lowlands along the Paraná River that require the expenditure of millions.

This is not a cheap man's country. No one with but a few hundred dollars should come here expecting to reap thousands. In fact, one's expense account is higher in Argentina than in the United States. The better class hotels are exceedingly costly. At the Plaza, one of the chief hotels of Buenos Aires, I find the lowest charge for a room without bath is five dollars per day, and the lowest price for meals is five dollars. There are, however, a number of good hotels where the charges are lower. I pay thirteen dollars a day at "The Grand" for myself and my secretary, for accommodations that would cost me at least twice as much at the Plaza. We are on the American plan, and have two rooms and bath, with excellent beds and good cooking. We have a breakfast of coffee and rolls in our room, a table-d'hôte luncheon, and an excellent table-d'hôte dinner. Wines and liquors are high, while my mineral water orders come to almost as much as the average charges of Rome or Paris.

The commercial traveller coming to Argentina should bear in mind that he will require a license for selling and also that there is a tariff on importations. A different license is charged for each province. Here in Buenos Aires the annual fee for selling goods varies from two hundred to two thousand dollars. This annoying and expensive restriction is frequently avoided by assigning commercial travellers to some large importing house in Buenos Aires under whose auspices they work. These houses often have agencies in other provinces and attach

the foreign agent to their local agent so that he need pay no license fees at all.

There are also laws requiring all contracts to be written on stamped paper, the value of the stamps being regulated by the amount of the contracts, and ranging from five cents to fifty dollars. All bills of exchange and promissory notes have to have stamps and certain of the provinces have their own special stamp taxes besides.

In the big customs house at Buenos Aires and the long line of brick warehouses on the banks of the Rio de la Plata goods are stored in bond and kept until the duties are paid. During the hard times of the post-war period several hundred automobiles were kept in the warehouses because the men who ordered them had no money to pay the tariff upon them. Many of the machines became a dead loss. All woven stuffs, ready-made underclothing, boots, shoes, and hats, pay fifty cents ad valorem, and there is a similar tariff on carriages, harness, and furniture. The tariff on dressed leather, blankets, and unbleached linens is forty per cent., that on wool and woollen stuffs, thirty-five. In addition there are specific articles subject to special taxes and there are reciprocal tariffs gauged according to the amount of business done.

No one should expect to do much business in Argentina or Chile without understanding the Spanish language. The man who comes here should have money to spend and time to build up trade properly. Furthermore, he should be well educated, well dressed, and polite. There is no place in the world where good manners mean more, or where they pay quite so well.

One of the great handicaps to development of American trade in Argentina, as in all other South American coun-

tries, was the lack of American banking facilities. Amendment of our national banking laws permitting the establishment of branch banks abroad finally remedied this situation, with the result that several American financial institutions are now active in this field. In Argentina, the National City Bank of New York has branches in Buenos Aires and Rosario, and eight more elsewhere in South America. The First National Bank of Boston, the American Foreign Banking Corporation, and the Guaranty Trust Company of New York also have established South American branches. Through a combination of American and Argentine interests the American Bank of the River Plata was formed to take over the Banco Mercantil y Agricola de Buenos Aires. The Bank of Central and South America, organized under United States laws, is also represented in Argentina.

These American institutions do a general banking business, dealing in exchange, letters of credit, collections, and deposits. They do business in American dollars and Argentine pesos; and one can buy drafts on the United States without having to translate the local currency into pounds, shillings, and pence and then translate the pounds, shillings, and pence into American dollars. On my earlier journeys in South American countries I always had to carry a letter of credit on London, thus paying a tribute of about one per cent. to the "Old Lady of Threadneedle Street."

The big English, French, German, and Italian banks here are trade agencies of their respective countries. They devote themselves to developing that trade, and are reservoirs of information for their nationals engaged in business. An American capitalist told me that it is

Buenos Aires is one of the great ports of the world, the chief entrance of a country with the second largest purchasing power on our hemisphere, yet for many years the lion's share of her trade went to Europeans.

American-made farm implements are supreme in Argentina and are found working the land and harvesting the crops in all parts of the Republic. The photograph shows a pear orchard of the Rio Negro valley.

impossible for us to get our share of the business in South America without American banks. He was interested in contracts involving millions of dollars, and as long as his money and commercial paper had to pass through the English or German banks his competitors knew just what he was doing.

Our American banks are preventing such "leaks" and serving as strong agencies for pushing American trade. They collect information as to the credits of the various companies and merchants, and keep files of such credits in Buenos Aires and Rio Janeiro and duplicate files in New York.

Banking in Argentina is done on a scale as big proportionately as the wheat farming and stock raising. One native bank in Buenos Aires has a capital of over fifty million dollars and deposits of more than four hundred million dollars in paper, or close upon two hundred million dollars in gold. This is the National Bank of Argentina, which has several hundred branches scattered over the republic. There are many other banks organized by Argentine capital besides the great foreign banking institutions which have their headquarters in Europe.

One of the most important of the native banks is the Banco Hipotecario Nacional, which lends money on real-estate mortgages, issuing therefor bonds payable to bearer. These bonds pass from hand to hand. They are known as *cédulas*, and are guaranteed by the government. They bear five or six per cent. interest and special provisions are made for their redemption. The law requires this bank to place fifty per cent. of its profits in a reserve fund and its safety is carefully guarded. Its loans are made on farm lands at a low valuation and on

lots in the cities at sixty per cent. of their assessment. The rate of interest on the bonds may not exceed six per cent., and all loans are subject to annual reductions of one per cent. This bank, which has been in operation for more than a generation, is said to have been a great factor in the rapid development of the republic.

There are three big Italian banks, and there is one Spanish bank with a large capital and surplus. This is the Banco Español del Rio de la Plata, with sixteen branches in the capital and many others in different parts of Argentina and Uruguay. Its capital is larger than that of the National City Bank of New York and it has long been paying big dividends. The French and Italian banks are strong and successful. In ordinary times the interest rates are from eight to ten per cent. But in hard times one per cent. a month is easily had and the loan brokers charge more.

The country is financially sound, but our American investors and exporters are learning that it is subject to ups and downs. It is rather like old Egypt with its seven years of plenty and its seven years of famine. On my first visit the people were still suffering from the panic following the failure of Baring Brothers. They had had a boom for ten years, during which more than six hundred million dollars' worth of stock was floated, five hundred million dollars of which was totally lost. The country quickly recovered from that trouble, however, and developed at dynamic speed up to the time of the stringency due to the World War. The emergency demand for wheat, corn, and meat raised the prices so high that the country profited from the extraordinary foreign business created by the troubles abroad. At the

same time, the problem of unemployment became acute, and there followed a long period of readjustment and deflation, just as happened in almost all the other countries of the civilized world.

The well-to-do Argentineans are somewhat spoiled children of Nature. They are so used to bumper crops and increasing values in land, live stock, and everything they own that when reverses come, through rainy harvest seasons or late frosts, or the reflex of world troubles, they are likely to become panic stricken. But they recover quickly and few countries promise more as a permanent market for American goods and a field for sound investments than the Argentine Republic.

## CHAPTER XXIX

### A DAY ON AN ESTANCIA

I HAVE visited to-day San Juan, the famous *estancia* belonging to the sons of Leonardo Pereyra, and typical of the great cattle farms which have made millionaires in Argentina. There was bred the Shorthorn bull, Americus, that sold at auction in Buenos Aires for thirty-five thousand dollars in gold, at the time the highest price ever paid for any bull anywhere.

The *estancia* lies on the Rio de la Plata, almost on the edge of the city of La Plata and within an hour's ride of Buenos Aires. Extending nine miles along the river and far back into the country, it embraces thirty thousand acres of as good pasture land as any in Kentucky, divided up into fields of one hundred acres or more. In these fields feed some of the finest-bred cattle in the world.

The founder, Señor Pereyra, was the first Argentinean to realize the importance of high-class pedigreed stock and began his herd of Durhams in 1857, when he imported the bull Defiance and the cow Coral. The next year he bought the famous bull Don Juan and the cow Dahlia, and later on other Shorthorns which stand high in stock-breeding history. On the San Juan *estancia* to-day are Herefords with pedigrees dating back fifty years and Lincoln and Rambouillet sheep that have won silver cups at fairs all over Argentina.

This vast farm has more than six thousand cows of

So long as Argentina uses her huge grain wagons, pulled sometimes by twenty or even thirty horses, her roads will continue too wide for scraping or surfacing, and just so long will sales of our automobiles outside the cities increase slowly.

"When sold for thirty-five thousand dollars Americus became the world's highest priced bull. I found the Argentinians doing more to improve their beef cattle breeds than our own stockmen with whom they compete in foreign markets."

fine blood and hundreds of pedigreed bulls. It is used as the chief breeding establishment to supply the other great ranches belonging to the family, where there are something like a hundred thousand cows, and from which are sold every year many thousand fat steers.

The amount of land the Pereyra family owns runs into tens of thousands of acres, while their stock exceeds the wildest ambitions of any Job, past or present. Forty of the family were on the farm at the time of my visit.

San Juan is one of the most beautiful estates in this land of millionaire farmers. I have spent the greater part of the day going over it. The railroad station lies almost at the gates, and the house is approached through wide avenues of magnificent trees. I was driven in a carriage drawn by two blooded horses, for an hour or more, through a mighty park planted by the family. It is a eucalyptus forest, the trees of which are a hundred feet tall and as big around at the base as a hogshead. Here a stream winds about through the forest, and there one glimpses a lake about which stand great clumps of bamboos. Some of the avenues are lined with palms of many varieties. There are rustic bridges and islands covered with tropical verdure. At times I was reminded of some of the forests of Japan, and again of the wonderful gardens on the edge of Biskra in the Sahara, the scene of Hichens's "Garden of Allah."

In places this part of the estate looks like a great English park. There are nearly eight hundred acres in trees alone, all of them planted by Señor Pereyra. I saw one pine tree with a spread of fully fifty feet. When Señor Pereyra came from Europe he brought this tree as a tiny sprig. It was one of the first trees planted upon the

estate, for before that time the country was nothing but a plain covered with grass.

Now there are trees everywhere. They are planted in the fields as shade for the animals, twenty thousand being set out every year. I saw a herd of deer feeding in the forest, all the offspring of a male and two females brought here some forty years ago. As we rode over the estate we now and then scared up a wild ostrich. There are hundreds of them running through the fields, and the major domo told me that in galloping after the cattle he often hears a splash and finds that his horse has dashed into a nest of ostrich eggs.

I despair of describing the fine stock of this *estancia*. I am not a cattle breeder and do not speak in technical terms. The first herd I looked at consisted of fifty pedigreed Herefords ranging in age from three to eight years. Their average weight was about a ton, and they had never been fed on anything but grass. Several of them were prize cows, and others were destined to win blue ribbons. One weighed twenty-five hundred pounds although she was only four years old. She seemed to be all meat, and when I pressed my thumb into her back it made hardly a dent. This cow's name was Lady Clare. Two of her calves have sold for twelve thousand dollars each.

I photographed a two-year-old Durham cow, which weighed almost two thousand pounds and was perfect of its kind. Señor Pereyra has refused fifteen thousand in gold for her.

My next visit was to the stables where the fine bulls are kept. There are five stables, each covering perhaps half an acre. They are long, low buildings, divided up

into great box stalls. The floors are of brick but the animals stand upon boards covered with bedding about a foot deep. The doors to the stalls slide on rollers and everything is in the most modern style. There are thirty bulls in each stable, but the ventilation is perfect and there was no stable smell. The stock is washed and scrubbed every morning, while before they enter the shows they are treated to a special lotion that makes their coats shine like satin. They are cared for like so many kings, each bull having his own private stall fifteen or twenty feet square. At my request some of the bulls were led out that I might photograph them. None weighed much less than a ton, and every one was of royal blood. Altogether there are about two hundred bulls, each with a pedigree longer than some of the genealogies in the historical collections of Boston.

Going through the stables, I saw a ten-day-old bull calf sucking a cow. It was not as big as a Newfoundland dog, but it was a perfect Durham in shape. When I asked as to its value, I was told that it was worth at least two thousand dollars. It was so small that I could have lifted it up in my arms. I venture to say that it is one of the most valuable pieces of veal on record.

As I rode from herd to herd through the great fields and looked at these animals I was surprised at their gentleness. Both bulls and cows could be approached and petted with perfect safety. These cattle are never sworn at, or roughly treated in any way. A child can go into the stall of any one of the bulls without danger.

Later I saw the dairy. It contains scores of cows which have been bred by crossing the Holsteins with other breeds. In this way Señor Pereyra made a milking strain

of his own. It is said to be superior to any other for Argentine use.

Then I was shown some of the sheep. There are thousands of them, including the finest Lincolns, Rambouillets, and Blackfaces. All the sheep are pedigreed, and in the sheep stables we saw some of the prize animals. They are kept in great pens under roofs, each pen being fifteen feet square, and there are about twenty sheep to the pen. Thoroughbred Angora goats are another product of the farm.

I drove over the fields in which the fine breeding animals are kept. These fields are in squares, some of them one hundred and seventy acres in extent. They are so arranged that there is a well and a windmill for every four fields. The windmill is inside a ring and the gates from each field open into the ring, so that the stock from each field can be kept separate when driven in for water. Despite its great size the estate employs only two hundred men, the larger number of whom are used about the stables, the park, and the gardens, and in the service of the family. On some of Señor Pereyra's other *estancias*, where there are from twenty to eighty thousand cattle, only one third as many men are needed. The cattle are allowed to run as they please, and the only thing to be done is to keep up the fences and see that nothing happens to the stock.

On this estate the peons and head men have their homes rent free in addition to their wages. Each family receives also from seven to ten acres of land for its own use, besides grain and corn for a few pigs and cows. Two cows for milking and an allowance of meat according to its size are also allotted to every household. In a large family

the meat ration may be ten or twelve pounds per day, and in a small one only three or four pounds. Two animals are killed every day for the use of the *estancia* alone.

When the agents of the great packing companies come out periodically the stock is shown to them in large herds. There may be a thousand in a single herd, and the buyer may take the whole thousand or he may select only seven or eight hundred. He buys what will make the best chilled beef, paying by weight. The average steer on the hoof will bring from one to two hundred pesos, or from eighty to one hundred and sixty dollars of United States money.

For fine stock this estate of San Juan is one of the best in the republic. It is devoted rather to breeding than to raising beef, and many of the animals born here are shipped to the other *estancias* of the owner to improve the stock. Some of the Pereyra farms are composed entirely of alfalfa fields. There is one used for stock raising which has twenty-seven square miles of alfalfa.

None of the beef here is corn fed, and until lately most of the cattle were raised on native grasses. Now they are brought up on grass and fattened on alfalfa. The latter crop is sown by the tens of thousands of acres. There are single fields of alfalfa of more than one thousand acres, and I know men who have ten and twenty thousand acres in single tracts. Coming to Buenos Aires from the foothills of the Andes, I rode through a stretch of country which a few years ago was regarded as desert.

Some Italian wheat farmers from the East moved out and broke ground for grain, but the soil was found to be so light that it could not be farmed. Then alfalfa was tried;

its deep roots went down to the water, and now that region is one of the best alfalfa lands on the globe.

The cattle of Argentina feed out of doors all the year round. When the stock is taken off the native grasses and put on alfalfa to fatten, it is turned into a great fenced inclosure and allowed to feed at an alfalfa stack as our cattle are fed upon straw. In this way a large number can be cared for by few men. The cost of stock farming is reduced to the minimum, for the cattle feed in those great fields without need of barns or sheds and the winters are so mild that there is plenty of grass the year round.

The Argentine stockmen realize the value of alfalfa in making beef and have enormously increased its acreage. As soon as the land is in that grass it rises in value. Steers raised on it can be marketed a year younger than if grown on the native grasses, while its use doubles the carrying capacity of the *estancia*. In southern Córdoba and Sante Fe three thousand cattle are fed all the year round to every square league of alfalfa. It is said that another thousand head could be added if all were breeding cattle. Since finely bred stock does not thrive on the native grasses, there are many millions of acres in Argentina that will have to be put into alfalfa to yield full value. Lands which have been carrying three thousand sheep to the league—that is, one sheep to two acres—can now carry double the number. It is estimated that one animal feeding on native grass requires as much as eight acres. Moreover, alfalfa keeps on producing hay year after year, for fattening or for piecing out the other crops in case of a drought. Grown for hay, it gives one hundred per cent. profit. It is easy to raise and enriches the land, each ton of hay containing fifty pounds of

nitrogen. Three or four crops of dry fodder may be grown a year, with a yield of seven or eight tons of hay to the acre. The alfalfa farmers are the best stock farmers and nearly all who have gone into the business have made money. Much of the wheat land, after being used for a short time, is now turned to alfalfa, for upon this crop the great meat supply of the future depends.

Besides the pedigreed animals used for improving the stock on the San Juan farm there are those sold at the stock shows. The Pereyra herd acquired a great reputation when it produced Americus. He was the son of Centennial Victor and Ravenswood III, and had a pedigree running back to the fifteenth generation, his fifteenth great-grandfather being named Julius Cæsar. Since his day the Pereyra herd is often the leader at the shows.

There is great rivalry among the breeders, and the stock show in the suburbs of Buenos Aires is a national event. The Argentineans are so keen to secure the coveted blue ribbons that they will trust none of their countrymen to act as judges at these shows. The judges come from England and are recognized authorities. They are guests of the Argentine Agricultural Society during their stay. Their travelling expenses are paid, as well as their living expenses for three weeks at the best hotels in the city.

At the shows it is not uncommon to have a thousand cattle and as many sheep on exhibit. A stock sale brings in occasionally as much as one million dollars, while net sales of half a million are common. The pedigrees of the famous bulls are known everywhere and each man keeps his stock book and stock register. At the sales the most popular cattle are the Shorthorns, with next to them

the Herefords, while Durhams have been much used for crossing with native stock. On one four-year period Argentina imported three thousand fine bulls from England at a cost of three million dollars.

Importations of foreign stock are rapidly raising the standard of Argentine beef. A generation ago fifty per cent. of the cattle here were native bred of the class known as Criollas, the offspring of the Spanish stock, which was determined by inbreeding. Only about eight per cent. of the stock is now native bred.

Indeed, the Argentine cattle industry has come a long way since those early days when the greater part of the stock ran wild and was killed merely for hides and tallow. It is related that more than a hundred years before our Declaration of Independence was signed, a traveller found at Buenos Aires twenty-two Dutch and English vessels laden with bulls' hides. Each had aboard fifteen or sixteen thousand hides, and in all three hundred thousand cattle had been slaughtered to procure the hides shipped by that fleet. These hides netted the exporters about one dollar each, while the ships' owners made a profit of some six hundred per cent.

It is even said that the cattle increased so fast that they would have devastated the country had it not been for the wild dogs which devoured the calves. A priest, writing of the abundance of the cattle, said the country was so covered with them that any one could take all he wanted up to ten or twelve thousand head. If he needed more than that he had only to get a license from the government. In the middle of the eighteenth century it was estimated that the Argentine had forty-eight million cattle, which were still killed chiefly for their hides. The animals were

San Juan is one of the most beautiful estates in Argentina, the land of millionaire farmers. Some of its thousands of acres have avenues of magnificent trees and streams and lakes set in forests.

For cattle raising it is customary to divide the land into wire-fenced grazing fields of one hundred acres or so, while trees are planted liberally not only for the owner's pleasure, but to provide shade for the animals.

then worth a dollar a head; though in times of drought the price rose to two dollars! In addition to the hides the tallow was sold; but it was not until early in the nineteenth century that beef was cut away from the bones and salted and sun-dried as jerked beef.

To-day there are thirty-five million cattle in Argentina, or almost half as many as we have in the United States. Argentina is surpassed in the number of her cattle only by India, the United States, and Brazil. But it is probable that she will take second place, and that in no distant future. It is estimated that she has about five hundred million acres of good land. Taking out half to be used for grain raising, diversified farming, and town sites, there would remain a quarter of a billion acres. Properly handled, this would easily support one hundred and fifty million cattle, or more than five times as many as are now raised. This estimate is not at all extravagant considering the undeveloped resources of the republic, and with intensive cultivation the number might be further increased, especially on the lands producing alfalfa.

## CHAPTER XXX

### BEEF AND BUTTER FOR OUR MARKETS

DO YOU want a tenderloin steak from south of the Equator? You can buy one any day in our great city markets. Every few days steamship loads of beef put off from Buenos Aires for New York. *Frigorificos* for killing and freezing cattle and sheep are growing in number, and large American companies are engaged in the business. The Armours have a plant at Buenos Aires, which is killing half a million beeves a year, and another at La Plata of about equal capacity. The Swifts have an establishment at La Plata covering twenty-two acres. Moreover, there are other companies, owned by English and Argentineans, which are shipping meat to the United States and to Europe.

During my stay in Buenos Aires I have seen single vessels start for New York with thirty thousand quarters of beef in their cold-storage chambers. That meat will be twenty-odd days on the ocean, but when it arrives in New York it will look as fresh and taste as sweet as any that comes from Chicago. The purchasers will not know the difference and it will cost somewhat less. Our Chicago beef is often held in cold storage a fortnight before starting to the markets, and may be two weeks in cold-storage cars on the way. Then comes the wholesaler, who may hold it for a week longer, then the icebox of the

retailer, and finally the consumer. Provided that the refrigeration is perfect, this does not hurt the meat. Indeed, many think it is the better for keeping. Some of our best hotels prefer beef forty days old and have aging rooms where whole quarters are kept at a low temperature for a week or more. Large restaurants often keep their best loin and rib roasts from thirty-five to forty days before they are served.

But let us visit some of the big meat-freezing factories of Buenos Aires. The Frigorifico La Blanca, owned by the Armours, is nominally an Argentine institution, managed independently of any of the great packing establishments of the United States. The management and methods of working are practically the same as those of our Western packing houses.

On our way to the plant we passed the great docks of Buenos Aires, and ferried across the River Riachuelo to a group of great two-story buildings made of reinforced concrete and roofed with galvanized iron. Before entering them, we put on white cotton coats to protect our clothes. We started in at the cattle pens, which are all under cover and which must have an area of at least six acres. I have never seen better steers outside our stock shows. Most of the animals were Shorthorns and Herefords, and I was told that their average weight on the hoof was more than thirteen hundred pounds. They had small heads, short necks, and the wide, smooth, fat backs and great flanks that mean good beef. An additional hundred pounds' average weight of steers means much in profits to an *estanciero* who sells tens of thousands of head a year. Cattle mature more quickly here than in the United States. Those

I saw awaiting slaughter were from three to five years old.

I passed through room after room, watching all the processes of turning the live stock into beef. As the cattle pass through a swimming box on their way to the killing room they receive a shower bath. They are killed by being knocked on the head at the rate of two per minute; and the carcasses are then cleaned and cut up in the same way as in our beef-packing plants. The work is all done under careful government inspection. The veterinaries examine the stock before it reaches the killing rooms and as soon as an animal is killed it is again tested to see that it has no disease. Then a piece of the meat is cut off, labelled, and sent to the laboratory to be further examined. Every quarter of beef has to bear the government stamp showing that it is fit for human consumption, and the sanitary arrangements are fully equal to those of the United States.

After being killed and dressed, the beeves go into cooling chambers, where the temperature is about thirty degrees Fahrenheit. They are hung up in halves, each weighing about five hundred pounds. As I stood in the cold rooms I could look down the long lines of pink-and-white beef. The walls were white and the floors covered with sawdust, and the combination of white-and-red flesh was beautiful under the electric lights.

I next entered the freezing rooms, where they were preparing the tongues, hearts, tripe, and liver for export. I picked up one of the tongues. It was frozen stiff, as cold as ice, and hard as a bone. I picked up a frozen ox-tail which had a knob on one end as big as my fist and reminded me of an Irish shillalah. I struck the board

In riding over the pampas one misses the farmhouses and farms of our prairie landscapes. Sometimes for hours there are only leagues of grass unbroken except for occasional herds of cattle or their corrals.

The Argentinians realize the value of alfalfa in making beef. Steers raised on it can be marketed a year younger than if fattened on native grasses, while its use doubles the carrying capacity of an estancia.

"I have seen single vessels start from Buenos Aires to New York with thirty thousand white-shrouded quarters of beef in their cold-storage chambers. When that meat arrives it will taste as sweet as any from Chicago."

floor of a truck with it and the wood cracked. I was shown also frozen tripe intended for the United States. It looked like a great white coral, or sponge.

Later on, I saw a ten-thousand-ton steamer taking on beef for the States. It carried enough to give a pound to every man, woman, and child in New York, and leave an equal allowance for every citizen of Philadelphia.

The beef is shipped in quarters, clad in white cotton shrouds. By means of trolley conveyors the quarters pass from the factory right into the hold of the steamer. Frozen mutton is loaded in much the same way.

The Argentine plants are as careful as ours in saving the by-products. Every part of the animal is used for something. The hides are dressed and cleaned, salted and dried, and shipped to Europe or to the United States. The bones are cut up for knife handles and similar articles, and the offal is made into fertilizers, which are largely exported. A great deal of meat is canned, and soups are prepared from the scraps.

Of the twenty-eight hundred workers in the La Plata plant three hundred are Argentine girls. They are young and quite attractive in their uniforms of caps and aprons furnished by the company. With the single exception of the butchers, the men employed are Italians and Spaniards. The butchers are the native Argentine *gauchos* or cowboys.

Argentina has some items of meat export that we do not find in our government statistics, such as jerked beef and powdered meat. It is an interesting bit of history that in 1602 Philip III of Spain issued a *cédula* authorizing the export of meat from Buenos Aires, under which edict jerked beef was at first the only kind of meat sent

out, chiefly to Havana. From the middle of the nineteenth century the export value of chilled beef was small, but since 1900 it has grown till a fifty-million-dollar export might be considered normal.

The oldest meat-freezing plant is the Sansinena, established in 1883, which has paid ten per cent. and more on its common stock. There are many others besides the American companies, and while the English are said to be very jealous of the Americans, accusing them of raising the prices of cattle and thus reducing profits, there seems to be abundant business for all.

I find much jealousy in Buenos Aires over the advances our American firms are making in the packing-house business. Some years ago all the killing, freezing, and shipping was in the hands of the Argentineans and British. Now the bulk of the shipments are sent out by the American *frigoríficos*, which are steadily increasing in capacity.

American packers here have been shipping more meat to Europe than to the United States, while the Argentine and British packing firms send also to our markets. All of the *frigoríficos* look upon us as one of their chief customers of the future. They realize how our meat supply is decreasing, for statements are published showing how our exports have dropped until we have now less meat than we need. Knowing that our cattle are fewer in number than before, they believe that Argentina must come in to supply the deficit. There are several reasons why we are likely to remain a meat-buying country. Our large ranches have been divided into smaller holdings and more land is given to dairy and grain farming. Hence our beef production does not keep pace with increasing population. We have also a wasteful habit of killing off calves to

supply the demand for veal. The average weight of a yearling is seventy pounds, perhaps, while a two-year-old will weigh six hundred pounds. The United States has frequently killed eight million calves a year, yielding over five hundred million pounds of veal, which if left to mature would have become almost five billion pounds of beef. Another great source of waste lies in our lavish use of meats. At most public places a guest is served with a great deal more than he needs.

Not so many years ago the dairy industries hardly existed in Argentina. Even now it is not uncommon to find an *estanciero*, owning tens of thousands of cows, using canned milk for his coffee. Butter was for years practically unknown on estates that owned more cows than Job ever dreamed of possessing. To-day, more than four hundred thousand quarts of milk are brought into Buenos Aires every morning, and the annual export of cheese is about twenty millions of pounds, the total production for a year being about fifty million pounds.

I have been to see with my own eyes the world's biggest butter farm, La Martona, which supplies most of the butter and milk for Buenos Aires, besides sending its products to all of the other Argentine provinces and the neighbouring countries.

This great farm was established by Vicente Casares. The dairy is managed like a great American factory with experts in charge of the plant, and the work goes on with the best machinery imported from all parts of the world. The ploughing is done with American steam ploughs, the sterilizing machinery comes from Europe, and the patterns of the churns are from far-off Australia. The butter fat is tested by an American device, while the milk is pas-

teurized upon the basis of conclusions reached by the great scientist of France.

I spent a whole morning in going through the dairy and over the farm. My conductor was an Italian expert. He could not speak English, and my Italian and Spanish are lame, like my French. But with all three languages we managed to understand each other. I went through the rooms filled with shining machinery and immaculately clean.

Later we took a look at the cows, driving through field after field where hundreds were grazing. The farm is divided into camps and stations; each station has a house for the manager, near which is its milking corral. The cows are driven in every morning and are milked once a day only in the wire-fenced corral, which covers perhaps half an acre. About one hundred cows are milked at each station. A strap is tied around the hind legs and tail of each animal to keep it still and to prevent dirt from getting into the milk. The milking stations are so numerous and scattered over so great an area that five hundred horses are required to collect the milk and distribute the empty cans. The cans are hauled in carts driven by *gauchos*, and are sterilized by super-heated steam after each milking.

I watched the milk poured into the centrifugals in which it is cleaned. Each of these machines holds one hundred gallons. After the milk goes through them at different temperatures, it passes through a pasteurization plant. I saw great separators out of which the skimmed milk was pouring in a steady stream through one pipe, while the rich yellow cream was flowing out through another. I watched the churns, each of which will turn out five

Distances are so great on La Martona, the world's biggest butter farm, that several milking places like this must be scattered over the estancia. It not only supplies Buenos Aires, but exports dairy products.

La Martona dairy is managed by experts and equipped with the finest machinery. But over Argentine roads deliveries from farm to factory must be made by the big-wheeled cart rather than the imported motor truck.

The gaucho is the horse and cattle man of the Pampas, living in the saddle and scorning sheep herding and farm labor. Like our Western cowboys, he is losing his picturesqueness, except in the movies where he is a popular favourite.

hundred pounds of butter an hour, and then looked at the machines where the butter is rolled over and over and pressed again and again until all the milk is worked out of it and it becomes solid fat. In this process no salt is used, as all the butter is sold unsalted.

Afterward I saw the milk for the city being put up in bottles. In another department milk was being bottled for the steamers which leave Buenos Aires every day. This was in pint bottles capped with tin, like beer bottles, the milk being so treated that it will keep many days. In a third room they were making an Argentine sweet or conserve of milk and sugar which is very popular. This is called *dulce de leche*. It is a kind of milk marmalade which is eaten with a spoon. It is sold in cans, the smallest of which holds only a half-dozen spoonfuls, and the larger cans about half a pint. The Argentineans like it so much that they often send cans of it to Europe as a special treat for their friends. The ingredients are only pure milk and sugar, which are put into great copper kettles and cooked by steam for twelve hours.

Compared to our production, Argentina's cheese and butter output is still small. Our dairies produce nearly eight hundred million pounds of butter a year and over six million pounds of cheese. But it must be remembered that in such things we are an old country while the Argentine is practically new. Moreover, we have more than one hundred and ten million people and the Argentine less than nine millions. But this country is advancing more rapidly than we are in such fields, and already she has begun to ship us butter at the rate of four million pounds a year.

## CHAPTER XXXI

### MAINLY ABOUT HORSES

ARGENTINA is noted as paying the highest prices for fine blooded stock in horses as well as cattle. Diamond Jubilee, which once belonged to King Edward of England, was sold to the Argentineans for over one hundred and fifty thousand dollars. This horse was later sold again for a still larger sum. Another famous horse came from France and cost sixty thousand dollars. One noted animal brought from England was purchased for nineteen thousand pounds, or ninety-five thousand dollars. He was kept for some time in Argentina and then sent to the United States at a price of more than one hundred thousand dollars. Some of the fine stallions from England have been returned home at increased figures. There have been many mares imported at extraordinary prices.

Every spring there is a sale of thoroughbred stock which brings in more than a million and a half of dollars for the colts sold. Sometimes the total runs as high as two million dollars. The average price of yearlings at these sales has steadily risen. In 1903 it was six hundred dollars, and since then it has reached three thousand four hundred and fifty dollars per colt.

These high-priced throughbreds, kept mainly for racing and breeding purposes, are scattered all over the country, greatly to the improvement of the native stock. Racing

is the national sport. In fact, the Argentinean of every class is invariably more interested in the turf than is the North American in the baseball diamond. More than nine thousand horses have been run in a single year, competing in over a thousand races. Three hundred and fifty thousand dollars is often handled at a single meeting. No race is run for less than one thousand dollars, while some of the races have purses of from five to twenty thousand dollars. In one year a single stable won more than two hundred thousand dollars in purses, and the total stakes were over a million dollars.

I wish I could take you to the Hippodrome near Palermo Park to show you the races. They are held on Sundays and Thursdays, and on all holidays. Everyone goes. In the grandstand one may see the president and his cabinet, the chief officers of the army and navy, and all the world and his wife besides. The race track is two miles in length and has an inner track for training purposes. The grandstand will seat many thousands. I was told there were about twenty thousand there the day I attended and that these people paid entrance fees all the way from one to seven dollars. The races are managed by the Jockey Club, which owns the track and gets ten per cent. of the receipts, which amount to several million dollars a year. A large part of this sum is given to charity but enough is left to make the Jockey Club the richest association of its kind in the world.

The betting is on the *pari-mutuel* order, the tickets costing about one dollar in gold. They can be bought in lots of from one to one hundred or more, and there is straight betting and place betting on every race. Rivers of men and women flow to and from the windows of the

betting booths. It seemed to me that everyone was putting up some money on every race. All were wildly excited, and as the horses neared the winning post, twenty thousand people rose with a yell. The crowd was well dressed, but there were more poor than rich, among them many Italians and Spaniards and thousands of native Argentineans.

The Jockey Club of Buenos Aires, founded many years ago, has steadily increased in popularity until it now numbers more than two thousand members, although its initiation fee is fifteen hundred dollars. The annual dues are ninety dollars. The club is not a money-making institution as far as the members are concerned. Its enormous receipts go back into furnishings and charities and to increasing the interest in horses and racing. Vast amounts have been spent on the club properties, the race track and buildings having cost over one million dollars.

The Jockey Club House is one of the handsomest buildings of the city. I have had the good fortune to dine there in company with our Ambassador. We sat about a round table in a small but splendid dining room, finer, I venture to say, than that of any palace in Europe. Later we looked into the state dining room which was one of the most beautiful in the world. The walls were covered with costly tapestries and carvings, and the rooms were decorated by famous artists. The club was a treasure-house from one end to the other. There was a celebrated statue of Diana by Falguière, while upon the walls were paintings by such artists as Bonnat, Bouguereau, and Roybet. The stairway to the second floor had marble steps and balustrades of onyx.

Notwithstanding the beauties of this clubhouse, the

members decided to give it over to the Argentine government for the use of the Ministry of Foreign Affairs, and have built a new clubhouse on the Calle San Martín not far from the Hotel Plaza. The site alone cost three million five hundred thousand dollars.

But the sporting spirit is not confined to the city dweller nor to men of means. Out in the *campo*, or country districts, the *gauchos* have races every Sunday and holiday. It is a passion with them, not a business. They ride fifteen or twenty miles to the meets, prancing in and shouting challenges as they come. The women drive in the carts and make fires among the bushes to prepare food and coffee for their husbands. The excitement is tremendous, the rivalry intense. They shout and gesticulate, cry up the merits of their animals, and ride like centaurs—all to win or lose a trifling sum of less than a dollar.

The origin of the Argentine horse is of especial interest to us. Our hemisphere had no horses until after Columbus came and the first horses of both North and South America were imported from Spain. They were descended from those produced by the Moors from a cross between the Barb and the Arabian. Some were sent to Mexico, where they ran wild, and we found their descendants in the wild horses of our Western plains. Others were brought to South America in the sixteenth century. Some of these belonged to Pedro de Mendoza, who had to abandon his settlement on the pampas when attacked by the Querrandi Indians. He left behind him five mares and seven stallions, and it is said that these twelve animals were the progenitors of the great troops of Argentine horses. They increased in such numbers that the wild

droves almost covered the plains. There were so many horses that at one time mares and geldings were sold to the government for two or three shillings each to supply the Indians with horse flesh. Later tens of thousands were killed for their hides and tallow, bringing from fifteen to twenty shillings a head.

It was not until rather late in the nineteenth century that horses became worth fifty dollars or more apiece. The early Argentineans were too proud to ride mares and during the first quarter of the nineteenth century more than a half million were butchered for what they would bring in hair, fat, and hides. Now the mare is almost as valuable as the stallion and horse breeding is exceedingly profitable. The Criolla mare, which served as the base for the native horse stock, to-day shows some evidences of its Arabian ancestry. It was dwarfed by being born and bred in the open without other food than the native grasses. It is irregular in shape and colour, ranging from the slender type to the short and stocky one.

The native horses are excellent for breeding, although crossing them with racing blood seems to take away their muscular strength and sturdiness and make them nervous. For working cattle, the lassoers on horseback need brawny, steady mounts. Crossed with the Percheron, Clydesdale, or Shire, the Criolla is a good general animal, fitted for draft or the carriage; while, crossed with the thoroughbred, it is especially fitted for cavalry use.

In riding over the country one sees large droves of horses and there is a regular importation of all kinds of fine animals. The number is steadily increasing, yet it is estimated that there is still room for many times the supply now on hand.

I have been interested in the methods of horse-breaking here. On the great stud farms, where fine stock is kept, the methods are much the same as in the United States, but out on the pampas, where the *gauchos* do as they please, the horses are allowed to run free until they are four or five years old. They are then lassoed and saddled by force. The *gaucho* mounts the horse and gallops him under a shower of blows until he is conquered, in much the same way as did our cowboys of the Far West.

The Argentine cowboy, or the native horseman and cattleman of the pampas, is of mixed Spanish and Indian blood. The Indian seems to predominate without concealing the Spanish. The *gaucho* is at home upon horseback, and is always ready to ride over the plains and watch or drive cattle. He does not like to take care of sheep, and considers farm labour beneath him. He looks much like an American Indian, though his cheekbones are not so high and his complexion is lighter. His eyes are coal-black, and he usually has a full, black, heavy beard and straight black hair. He ordinarily wears a felt hat and a blanket poncho with stripes, which is draped over his shoulder.

The homes of the *gauchos* are scattered over the pampas. They are often rude huts with doors so low that one must stoop to enter them. The floor is of earth and the furniture is a bed, a table, and one or two seats, the latter often being the skulls of bullocks. Their chief food is meat cooked over the coals and basted with the juice as it cooks. One of the favourite dishes is *carne con cuero*, which means "meat cooked in the skin." The meat is wrapped up tightly in the hide of the animal from which it comes. The skin keeps in the juices and

the result is delicious. The *gaucho* drinks *maté* usually whenever he can get it, but always the first thing in the morning. As *maté* is both a stimulant and a food, it enables him to go for a long time without other nourishment.

Every *gaucho* carries a knife a foot long, which is used indifferently for eating or fighting. In olden times it was customary for two *gauchos* with a dispute to settle to fight with their left legs tied together, each man kneeling upon the right knee and facing the other. Over one arm of each combatant was a blanket poncho, used as a guard, and in the other was his knife. At the drop of a handkerchief the two began to stab at each other, continuing until one was mortally wounded. To-day, as the country grows more and more settled, the typical *gaucho* is disappearing, and becoming a figure of the past or the movies, like our "wild Westerner."

At the spring sale of blooded colts the receipts sometimes amount to more than two million dollars. Distribution of this fine stock among the estancias does much for the improvement of the native breeds.

At one time great droves of wild horses, descendants of a few brought from Spain, overran the pampas and were valued only for their hides and tallow. To-day the horse is king, and breeding him a profitable industry.

The Parana, which fattens the wheat lands for which Rosario is the shipping centre, comes down from the north, through tropical vegetation where only the shrieks of brilliantly coloured parrots disturb the silence.

## CHAPTER XXXII

### WHEAT LANDS OF THE PARANA

THE bread lands of the Argentine are in the basin of the Paraná River. The heart of this district is the port of Rosario, situated on the river about two hundred miles from Buenos Aires. Ocean steamers sail for two hundred miles up the Río de la Plata into the mouth of the Paraná, thence winding about for three hundred miles to Rosario. The channel is so deep that great ships of twenty-four feet draft can reach Rosario at any time of the year, and they come from all parts of Europe and from the United States for cargoes of grain.

Great elevators have sprung up along the banks of the river, and the city has facilities for loading about two hundred thousand bushels a day. There is one elevator that takes in five hundred tons of grain an hour, and another that fills the hold of a four-thousand-ton vessel in less than five hours. The biggest elevator is seven stories high, with sixty silos on either side. The port borders the banks of the Paraná River for two miles and the wharves are about a mile long. Under the wharves are warehouses which will hold ten million bushels of wheat, while on the high banks of the river, thirty feet and more above the water, there are other warehouses from which chutes carry the grain down into the steamers.

The city of Rosario stands on a bluff so steep that the

grain can be loaded by gravity. The wheat is brought here in bags, and the cars carry it to the edge of the bluff. There the bags are thrown into the chutes by Italian labourers at the rate of forty or fifty a minute. They make one think of racing white mice, recalling the army of ten thousand rats that attacked and ate up Archbishop Hatto in his castle on the Rhine.

But the chutes are giving way to long pipes and the wheat is being delivered in bulk. A single elevator will have twenty or more such pipes, and a half-dozen ships can be loaded at once. The elevators are steadily increasing in number and size. Many have been built at Buenos Aires. There are also big ones at Bahía Blanca, on the coast, about ten hours south of Buenos Aires. The government has required the railroads to build warehouses for grain throughout the country, so that the Argentine will soon have a wheat-handling system of elevators like those of Canada and the United States.

The most-needed aid to profitable wheat growing is improved roads so that motor trucks may be used in place of the slow and clumsy carts. The first cost of these improvements would be enormous, but in the end they would prove a paying investment. The cost of hauling grain is almost prohibitive for farmers remote from a railroad or river.

Rosario is the Chicago of the Argentine Republic. It is the second largest city of the country and one of the richest of South America. It has more than two hundred thousand people and is growing fast. Standing in the midst of the wheat lands in the heart of the Paraná basin, the town is the centre of tens of millions of acres of good farming country. It is the head of navigation for the

river valley, and grain can be brought here on the Paraná and its tributaries from an area covering thousands of square miles.

The wheat lands of the Paraná basin were made by the earth washed from the Andes. These plains cover hundreds of millions of acres, which have produced two hundred million bushels of wheat in one year. About Rosario and in other parts of the valley the soil is a rich black loam from six to three feet deep, lying on a clay bed. Although about eighteen million acres are in wheat, the yield per acre is much less than it should be, owing to the careless farming. In Great Britain the average yield is thirty-one bushels to the acre; in Argentina it is only eleven bushels.

And yet it is safe to say that not one twentieth of the grain area has been developed. Those wide plains across which I rode from the Andes to the Atlantic hold possibilities of cultivation almost as boundless as their extent. A vast productive region lies northwest of Buenos Aires. Twenty-four hours' ride on a fast express brings one to Tucumán, where the country is much like our Southern states. Or, one can start at Buenos Aires and go south, riding through pastures and corn fields and wheat fields for a whole day. Or he can go directly north, and, crossing the Río de la Plata, come into the Argentine Mesopotamia, Entre Rios, which lies between the Uruguay and Paraguay rivers. The whole country will produce wheat, and, intensively cultivated, could almost feed the globe.

Scientific wheat farming is done only on certain large estates managed by the English and Argentineans. Most of the grain lands are in the hands of the Italians, many of whom farm on shares, doing their work in the most

slovenly way. A great deal of grain is sown broadcast upon ground which is only half ploughed, the wheat being merely dropped upon the clods. Some of the farmers drag bushes over the fields and others use harrows. On the small farms the ploughing is done with bullocks dragging ploughs through the furrows by a yoke attached to the horns. Few fertilizers are employed, and the only idea of the Italian seems to be to get the wheat into the ground, after which he sits down and waits for nature to give him the crop. But the Argentine government is fully awake to the need of modern methods, and nowhere in the world is there an agricultural department more energetic in carrying knowledge to the people through regional schools, travelling lecturers, coöperative experiments, and every kind of encouragement to scientific production.

Ploughing can be done at any time of the year, though the land is usually broken in February, March, or April. To get the best results there should be a second deep ploughing and the soil should be well harrowed before the wheat is sown. The average sowing is about a bushel of grain to the acre. The seeding time is May fifteenth for the central part of the country and later and later as one goes south. In Patagonia the seed is often put in during June or July, and sometimes as late as August. The crop grows so rapidly that about the middle of November or December it is ready to harvest. Four fifths of all the wheat of Argentina is cut and threshed in December, although in the south the harvesting season may continue until the end of January.

With the small wheat farmer, the size of the family gauges the profit. When planting and harvesting are going on the whole family works. The women go into the

In parts of southern Argentina, where the winds have full sweep over treeless plains, tamarisk hedges are set out for the protection of vineyards and orchards.

The richness of the soil makes for careless rather than intensive farming, so that the average wheat yield is only eleven bushels per acre as compared with over thirty bushels in England, France, and Belgium.

The Argentine Republic is the third largest exporter of wheat in the world, outranked only by the United States and Canada. This is one of the grain docks of Bahia Blanca, the commercial centre of the south.

fields and plough and reap, and boys of eight and girls of nine or ten do their share of the labour. The work goes on from sunrise to sunset, and on a moonlight night one may see them binding and reaping out under the stars. It is the same at planting time. Between seasons there is one long vacation when the people do nothing but loaf, living upon credit or the profits of the last crop. Drought or crop failure from any cause means increase of their debts, while a plague of locusts may bring ruin and famine.

Gradually the campaign of public education will change all this. There is no need for a dependence on one crop, for the land is capable of growing a variety of things, so the farmer could raise about everything he uses. Since ploughing can be done every month in the year, a succession of products, with proper fertilizing and intelligent rotation of crops, would improve the land as well as insure something to the farmer, no matter what happened to his wheat.

## CHAPTER XXXIII

### THE TERRIBLE LOCUST

THE locust is the terror of the Argentine farmer. It afflicts him even as it afflicted Pharaoh when he hardened his heart and would not let the Israelites go at the command of Moses. The chief difference is that Pharaoh had the plague for only a season, while the Argentineans have often to suffer for several years in succession.

The locusts that spread over Egypt sailed in on an east wind. Those that cover Argentina fly down from the north, and like their sisters of Egypt, they come in such swarms that they cover the face of the sun and darkness falls on the land. They eat all the vegetation and when they depart "there remains not any green thing in the trees or in the herbs of the field" throughout all the land that they cover. I talked with one entomological expert who went to Argentina from the United States and has made an exhaustive study of this pestiferous grasshopper. He says that the Bible description of the plague is not overdrawn. With the exception of the paradise tree, the locusts destroy every green thing. They eat the crops from the fields and chew up the grass. They clean the fruit trees of their leaves and eat off the bark to the wood. Orchards are to be seen where the oranges still hang on the branches although not a leaf is left. The locusts will go into a corn field and strip the leaves from the stalks, and if the corn is small they may eat it down to the ground.

They hang to the branches of trees like bees when swarming and the boughs often break with their weight.

During a tour up the Río de la Plata I saw fields that had been devastated by locusts, and I heard from Dr. Habnicht, one of a colony of Seventh-Day Adventists from the United States, that the hoppers frequently strip large trees of their bark, leaving nothing but the white skeletons. Where they attack ripe fruit one may see the peach stones still hanging and the bark of the tree completely taken away. They mow the grass from the ground, and cut the wheat in the fields so that the earth looks as though it were burnt. In places they cover the ground to a depth of two or three inches, hopping one over the other in their fight for food.

The size of the swarms varies. Sometimes they may cover but a few acres, at others they may blacken the land for many square miles. Railroad trains at times pass for more than a hour through a cloud of locusts extending far out on both sides of the cars and almost two hundred feet high. They are not in one solid mass, and as they fly they look like a snowstorm, their transparent wings catching the sun and having the appearance of snowflakes. They usually stop over night. A swarm about to settle down is tremendously thick, and may be two thousand feet wide, fifty feet high, and a mile long. It is so black that it looks like a stormcloud. After they get their wings, the adult locusts usually fly high enough not to affect the movement of the train, but while they are still in the hopper stage, they may crawl in bands over the tracks, and the cars crush them, making the rails so greasy that the wheels will not take hold, but fly round and round while the cars stand still. In such

cases two of the brakemen often sit on the cowcatcher, holding brooms on the rails to brush off the pests as the cars move. Sometimes they have to sand the rails. The young, wingless locusts are more voracious than when they are fully grown.

These insects are very much like our grasshoppers, but about twice as large. Their general colour is grayish red and they look like small birds as they fly through the air. They are not dangerous to man but when they fly low and hit one in the face it is annoying. The insects are prolific, and a great part of the damage is caused not by the grown-ups but by the babies. As they move over the country the females bore holes in the ground with their tails and lay eggs. Each female will lay a bag of from fifty to a hundred eggs and a month or so later these will have hatched out into young locusts which crawl out after a rain and begin their devastating march. They crawl and hop over the ground, consuming everything as they go. They keep on crawling until their wings grow. They advance in great hordes, climbing fences and entering the houses. Dr. Habenicht told me that they ate the lace curtains from his windows, and that they sometimes attack babies and bite them until the blood runs. As soon as their wings grow they fly away.

No one knows where the pests come from. Some say they are from Brazil, some from Bolivia, some from Paraguay and the Argentine Chaco. The Argentineans know that they come from the north and northwest and travel as far south as the provinces of Salta and Jujuy and the territories of Formosa and Chaco. After a time there are other swarms formed by the young hatched from eggs left by the first hordes, and as the weather grows warmer

Typical of the lavish spending of the land barons is this outdoor theatre on the estate of a wealthy estanciero near the capital. The walls, boxes, and wings are formed of hedges. The stage is floored of concrete.

As with cattle and horses, the Argentinians have greatly improved the native breed of sheep by importing blooded stock from Europe, until now the weight of the average fleece has been increased more than a third.

there are still other hosts until the whole territory is overrun. August and September are the season for them. When the weather begins to get colder they start north again. Entomologists think that the only way to combat the pests is by going to the country of their origin and studying their life history there. It is fighting in the dark to use only the feeble remedies possible after the swarms descend upon the land.

Argentina has long had laws for the extermination of locusts, and the government spends from one to five million dollars a year for this purpose. They are attacked in the swarms, in the egg, and when travelling as young over the country. They are caught in bags and cloths during the hours of low temperature and destroyed. The places where they settle are fired, and where they have laid their eggs the whole zone is often ploughed up. In other places the eggs are dug up with picks, and if the ground is wet animals are driven over the soil to destroy them. In some sections the government pays fifteen or twenty cents a sack, and a man may make fifteen dollars a night catching locusts. It is not uncommon to have five hundred wagonloads of sacked locusts brought to one of the receiving stations in a single day. The sacking is usually during the mating season, when they do not fly.

Another method of protecting the grain fields is to surround them with little fences of tin or sheet-iron. These fences may be eighteen inches or two feet in height, but it is impossible for the young locusts to crawl over them. They will come in battalions to a fence and then travel along it in both directions. At every three hundred feet holes about a yard deep are dug, and these are so bordered with tin that the insects drop into the

holes and cannot get out. The agricultural department has spent millions of dollars for such means of defence, and has on hand enough of such barriers to reach halfway around the world. There are also other locust traps. In places the crawlers are scooped up with scrapers and killed, and attempts have been made to destroy them with solutions of kerosene, arsenic, and creosote.

Another insect pest is the ant. There is one species that is not much bigger than the head of a large pin, but it exists in such numbers that the damage is enormous. It attacks the sugar cane and cotton. It bites its way into the oranges, and it crawls into the houses. It likes to work in the dark, and no place is safe from its attack. In some sections the bedposts rest in bowls of water or on panes of glass coated with vaseline, and I am told that mothers have been forced to take their babies from their cradles and dip them in water to clean off the ants. The little insects are so small that they get into the mouth and nostrils, and there are reports of babies having been killed by them. The Argentine ant has caused trouble in the United States. These ants have been carried by ships to our Gulf Coast, and for a time there were so many in New Orleans that they became known as the New Orleans ant. They are also found in southern California.

## CHAPTER XXXIV

### THE WORLD'S SECOND SHEEP COUNTRY

AS A sheep country, Argentina has unrivalled possibilities. Already she has more than eighty million sheep, or about ten to each inhabitant, and there is opportunity for still greater expansion.

The Mercado Central de Frutos of Buenos Aires is the largest wool market of the world. In connection with Bahía Blanca, the great port of southern Argentina, it handles practically all of the wool grown in the republic. The market is owned by a stock company, which has frequently paid dividends of from thirteen to fifteen per cent. There are acres of buildings. The main structure is of brick, with a vast iron roof supported by thousands of iron pillars. The Mercado Central, which I have visited, is on the banks of the Riachuelo River, surrounded by a network of railways so placed that freight can come in by boat and car from different parts of the republic and go out on ocean vessels to all parts of the world. Hundreds of millions of pounds of hides, grain, skins, and wool are handled here each year.

At shearing time the wool comes in by trainloads and shiploads. There are not enough cars to handle the clip, and the vast market is so packed that you can hardly get through it. Three floors are stacked high with bales of dirty, greasy wool. The streets are jammed with carts and wagons heaped with it. Much of the loading and

unloading is done with hydraulic cranes so that a great part of the clip goes from the cars and ships direct to its place in the market. Each man's consignment is in a pile by itself, in such form that the buyers can make easy examination. The wool is sold unwashed. Fifty per cent. of weight is said to be lost in the cleaning process, and the exporters prefer that the wool cross the ocean in an unwashed state. The clip contains so much grease that when I thrust my hand into one of the bales it came out shining, as though I had dipped it in vaseline, and I had to put on a cotton coat to save my clothes from stains.

The Argentine wool clip is growing in value. The quantity is not so great as in the past, but the quality is improving, and the yield per sheep is increasing. Owing to the improvement from importing fine stock, the average fleece is now one third larger than in 1860.

Next to Australia, Argentina is the world's largest sheep producer, but in spite of the great demand for wool and sheepskins and frozen mutton which was created by the war and which still continues, the actual number of sheep did not increase much. One reason is said to be the amount of care required to raise sheep successfully, compared with cattle raising or farming. In many places the *estancias* have for years been carrying flocks as large as they could profitably manage. The less settled provinces have been producing more and the older sections less wool than before the war. The world's production of wool and mutton just about balances the demand, and the Argentine farmer is apt to rest content with the profit of the day without making an intensive effort to increase the possibilities of future gain. He does not, as a rule, appreciate the fact that eternal vigilance is the price of

Bahia Blanca is destined to be one of the greatest ports of South America; already its foreign trade amounts to tens of millions of dollars a year, and its grain elevators and flour mills are the wonder of the continent.

Of her vast areas of public lands awaiting cultivation, Argentina annually sells some thirty-five thousand square miles. Purchasers must work their lands within two years in order to hold title.

profit. The Argentine wool is inferior in quality to that grown in Australia and only by constant importation of first-class stock can the quality and quantity be kept up to a high standard. With Nature's abundant gifts of suitable grazing land and every possible advantage of climate, the Argentineans should not fall behind in developing this great source of revenue.

In Buenos Aires province the sheep are kept in fenced inclosures. In the south they are herded in flocks of several thousand. No artificial feeding is done. Like other live stock the sheep live out of doors from one year's end to another. There are no sheds, barns, or stacks of hay in that region. The animals wander off in the morning, grazing in the direction whence the wind blows, and return in the evening to sleep about the huts of the shepherds. It is only where the grass is plentiful that the fields are fenced with wire. Since close grazing betters the grasses, a farm is improved by the keeping of sheep.

The herder may work for monthly wages or he may herd on shares for one fourth of the profit. His life is dreary in the extreme. His only home is a mud hut away out on the prairie; his only companions are the sheep, his horse, and his dogs. His chief food is mutton, as his employer allows him to kill enough sheep to supply himself with meat.

The first sheep brought to Argentina came from the West Indies. They were descended from flocks brought to Santo Domingo by Columbus and other navigators. From that island they were taken to Jamaica, Cuba, and Porto Rico, and thence made their way south to the Río de la Plata. In 1550 some were brought to Tucumán, in northern Argentina, and later others were driven over

the Andes from Chile. The Chilean sheep, also, are said to have originated from the Santo Domingo flocks, which came not from Spain but from the Canary Islands. If this be true, practically all of the sheep of Latin America had their origin in the Canaries.

By inbreeding for hundreds of years the native sheep became smaller, their wool grew hard and short, and they looked like goats. It was not until other importations were made that the flocks began to improve. An American consul named Halley, who represented us at Buenos Aires at the beginning of the last century, did much to introduce fine breeds into Argentina. But little attention was paid to the importation of fine stock until about 1862. After that Merinos were imported and a little later Southdowns and others. I saw on the San Juan *estancia* a Southdown flock descended from rams and ewes imported eighty years ago, about which same time Rambouillets and Blackfaces were also introduced.

Only recently has mutton brought a good price in the local markets. A generation ago sheep were so common that the beggars refused to eat mutton, and the only profit in sheep came from the wool. At an earlier time sheep were killed in great numbers without taking the trouble to shear them, the hides being allowed to rot so that the wool could be more easily plucked off. The bodies were then used as fuel for the brick kilns, and it is said that there are old churches in Buenos Aires built of bricks baked with sheep carcasses. At the beginning of the nineteenth century the flocks were so numerous that sheep were sometimes sold for six cents apiece, and at one time they multiplied so rapidly that thousands of the older ones were driven over the rocks into the sea to get rid of

them. At another period they were slaughtered for their tallow, a single sheep bringing as much as one dollar for its fat.

Before the white man came to South America, the sources of wool were the llamas, alpacas, vicuñas, and guanacos. These animals lived only in the highlands of the Andes. The vicuñas and guanacos ran wild, as they do now, and every year the Incas had a great hunt, during which they killed thousands of them and dried the meat. The wool was shorn and stored in the imperial depots.

Argentina was the first country to export frozen meat of any kind to England. The first shipments were on account of the foot-and-mouth disease, which led to embargoes to keep the live cattle and sheep out of the United Kingdom. It was not until 1885 that the industry was definitely established. To-day the business done in frozen mutton alone amounts to five or six million dollars a year. The mutton and lamb are exported in whole carcasses, weighing from thirty to fifty pounds each, for the English prefer the medium weights.

I have been through a packing house at Buenos Aires which has a capacity of five thousand sheep a day. When I entered the killing room the floor was covered with blood. There were two thousand animals in the pens, and hundreds had been skinned and cleaned and hung up to cool before being put in the freezing rooms. I stopped for a moment and timed the killing. Within just three minutes I saw a sheep pass from its active bleating life into a carcass, skinned and cleaned and ready to be frozen for its long voyage of seven thousand miles over the ocean to Europe. The killing was done in sight of the waiting victims, hundreds of which looked on while their brothers and sisters

were slaughtered. Every pen had at least fifty sheep, and along the front on a bench as high as my knee lay rows of dying animals. Each had two great round holes in its white throat out of which ran the red blood into a little canal below. Some were kicking, others were feebly groaning, but I could see that death was almost instantaneous. The killing is done with a long, double-bladed knife. The sheep is caught by two men, who throw it on its back upon a bench. While they hold it the butcher seizes it by the chin, bends the head back, and with one thrust drives the knife into its throat, cutting the jugular vein. He goes on to the next, and keeps on killing like a veritable machine, butchering them at the rate of one or more per minute.

As soon as the sheep is killed it is disembowelled and skinned. The cleaned entrails go to Germany for the casings of sausages. The kidney fat is made into an oleomargarine used here for cooking, and the kidneys are sold in the markets of Buenos Aires. The tongues are frozen; the feet and head are cut off. The carcass is then dressed after the fashion most popular in England. There are London market men here to superintend this part of the work.

The freezing is done in great chambers each of which will hold sixty thousand carcasses. These rooms have double walls of wood a foot thick, and their ceilings are covered with coils of pipes through which flow ammonia and brine, lowering the temperature to thirty degrees below zero. The coils were covered with frost an inch thick, and as I stood at one end of the room I could see a thousand freezing carcasses hanging from the hooks in the ceiling. They were almost ready for shipment, and,

Sheep are often herded on the pampas in flocks of thousands. Many of the largest owners are New Zealanders. who have done a great deal to develop the industry in Argentina.

In the wool market each man's consignment is placed by itself for the buyers' inspection. Most of the clip is sold unwashed and is so greasy that the dealers all wear long cotton coats to protect their clothes.

when my guide lifted one to show it to me, I found that its flesh was as hard as stone and that it would stand alone. That carcass had been in the room forty-eight hours.

Before shipping, the dressed sheep is sewed up in fine white muslin cloth. Then come the cold-storage chambers of the steamers, where the temperature is almost as low as that of the freezing rooms, and then the Liverpool or London market.

## CHAPTER XXXV

### THE CONDOR AND THE OSTRICH

IN THE mountain regions one of the enemies of the sheep herder is the condor, the eagle of the Andes. As these birds will attack any of the animals of the high Andes, especially if it be sick or wounded, the shepherds have to watch to keep them away from the sheep.

I have seen the condors in the mountains. They fly higher than any other bird. Their favourite breeding places are two or three miles above the sea. They may often be seen among the snows. I photographed a half dozen in the zoo at Lima, Peru, and it seemed to me that they were about the ugliest birds in the whole aviary. Their heads and necks had no feathers, and they looked like the gigantic vultures they are. The male condors have combs of bright red and a frill of white feathers at the base of their long, skinny necks. The rest of the plumage is black. These birds are sometimes compared with the eagle, but they are nothing like eagles in appearance and habits. They eat carrion, and if a llama or an alpaca lies dead in the mountains one may see them swooping down upon the carcass. When they find meat they gorge themselves, and as they become stupid from overeating they are then easily caught and killed. The condor is not seen on the pampas, although there are many vultures of other kinds there and in other parts of Argentina.

Another pest of the pastoral districts is the carancho, a comparatively small bird of a dark brown colour with a light band across its wings. It makes me think of a cross between a vulture and a hawk. It eats only carrion, but will attack lambs and pick out their eyes. I am reminded of the kea, the famous sheep-eating parrot of New Zealand, which has a way of fastening its claws in the wool and then tearing a hole into the live sheep to get at the kidneys.

About the most interesting of the large birds of Argentina is the rhea, or South American ostrich. They are found in great numbers running over the pampas and there are thousands of them in Patagonia. I have seen them from the car windows and have watched them hunted in the desert, where they squat down and hide their heads in the sand. As they are of the same gray colour as the bushes and bunches of scrub all around them, it takes a sharp eye to distinguish the birds from the bush. The ostrich has always been laughed at for this silly custom, but, indeed, there is nothing more cunning, as it insures a degree of concealment that the bird could have in no other way. When the rhea stands up one can easily distinguish him, but when he squats down, with his head out of sight, he seems merely a bush.

In walking, the ostrich keeps its wings closed and swings its neck backward and forward. In running, the wings are raised and the bare thighs show as it speeds along over the ground, skimming the air. On a charge, the wings are outspread, and the head and neck are held down. It can frighten a horse, and when angry will attack a man upon horseback. The American ostrich has

three toes, while the African has two. Its foot is large and powerful.

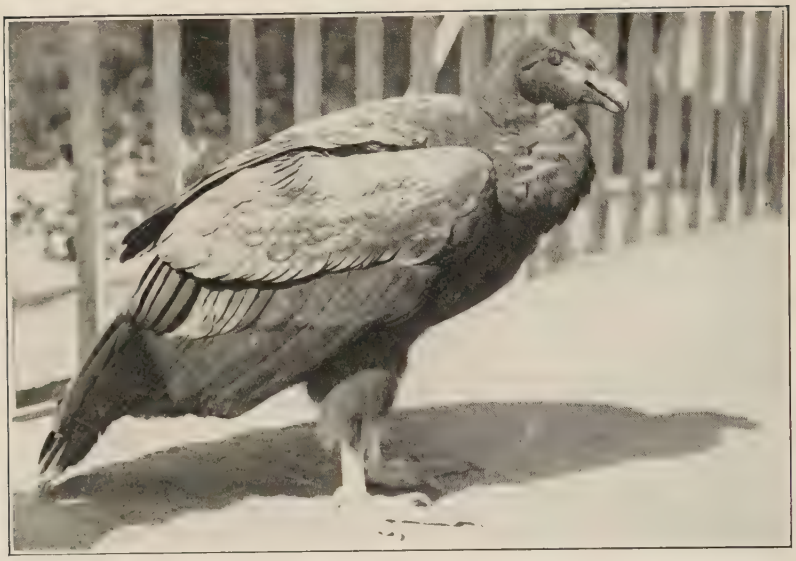
The American ostrich is smaller than the African and its feathers do not compare with those of the latter, although they are gathered and sold. I have seen some made into rugs. They are likewise used for fly brushes and feather dusters. The plumes of the male are sometimes combined with the African feathers for hats and bonnets. The feathers are of different colours, according to the parts of the body. Some are of rich brown and some black, but most of them are gray or a dirty white.

The ostriches of Patagonia and the pampas move about in flocks, each consisting of a cock and a number of hens. Every cock has his own hens, and will fight to the death any other cock that comes near them. The cock is a sort of sultan and the hens seem to be the ladies of the harem, who do his bidding. They lay their eggs in one nest, each hen giving her share, until fifty eggs may be there in a single hole in the sand. When the tale is complete the cock takes charge and sits on the eggs, relieved now and then by a hen, as his lordship directs. He has to keep sitting for five or six weeks before the chicks hatch.

Some of the ostrich eggs weigh a pound and a half, and it is not uncommon to have one served as an omelette when one stops over night in camp. The cock objects to having any one touch the eggs, and if they are disturbed he will leave that nest and start another.

I have heard a number of queer stories about how the cock raises his young. One of them tells how the first meal is gathered from an egg placed on the sand apart from the setting and several yards from the nest. The egg remains in the sun until the ostrich chicks come, by

Numbers of small herds of guanaco are found in Patagonia, where the Indians hunt them for food and their skins. Before sheep were introduced into Argentina, the long, soft hair of the guanacos was used for wool.



The Andean condor, highest flying bird in the world, has its nest two or three miles above the sea. It is really a vulture, and neither in appearance nor habits resembles the American eagle with which it is often compared.

Sheep can be raised on most of the land of southern Argentina though the pasturage is largely bushes and scanty grass. Some sections under irrigation are producing wheat and alfalfa.

which time it is rotten. When the little chicks appear, the father goes to the egg and breaks it. It gives forth a horrible smell, which attracts the flies for miles around. The little ones eat the flies, and thus have their first meal. The story is so interesting that I trust it is true!

The father also assumes care of the young ostrich brood. He calls them to him with a peculiar booming sound to which the babies reply with a chirp. He keeps watch over them, and shows fight if they are disturbed. At such times he will charge a dog or a man upon horseback, and if he can knock down his enemy he will kick and bite him. His kick is terrible, being sometimes strong enough to kill a dog or a man. Of late some of the *estancieros* have been introducing the African ostrich, which thrives well.

## CHAPTER XXXVI

### THE NATIONAL SUGAR BOWL

TUCUMÁN, the smallest province of the Argentine, is tucked away between the almost unknown Chaco and the seldom-visited Andes district. It is more thickly populated than any other part of the republic. This is only comparative, however, and merely shows how scattered is the population of the whole land outside the cities. Three quarters of Tucumán is mountainous and its density of population is in the irrigated section around the city of the same name. Half of the cultivated land is planted in sugar cane, and of the whole sugar production of Argentina this province alone supplies about eighty-five per cent. There is plenty of land farther north suitable for the purpose but it has only recently been put under cultivation. In Tucumán the local government, backed by the national authorities, has experiment stations and farms not only for the improvement of the sugar-cane output, but to encourage diversified crops. Once in a great while frosts occur severe enough to injure the cane, and a few such experiences have convinced the farmers that it is well not to have all their eggs in one basket.

Two thirds of the sugar mills of the country are in the province of Tucumán, so that it is in very fact Argentina's sugar bowl. The industry has expanded with the increase of demand from a growing population, and the

product is used entirely for home consumption. If the crop falls short, sugar is imported, but the government protects the infant industry by a duty on foreign sugars.

The Jesuits inaugurated sugar growing in Argentina as they did so much of its productive development, but when they were expelled their lessons were forgotten, and not until 1840 was there again a sugar mill in the land. It was more than a generation later before there was any modern machinery or systematic production. The native cane has been superseded by a Java variety which yields three times as much per acre under the best conditions, and is certain to be twice as productive.

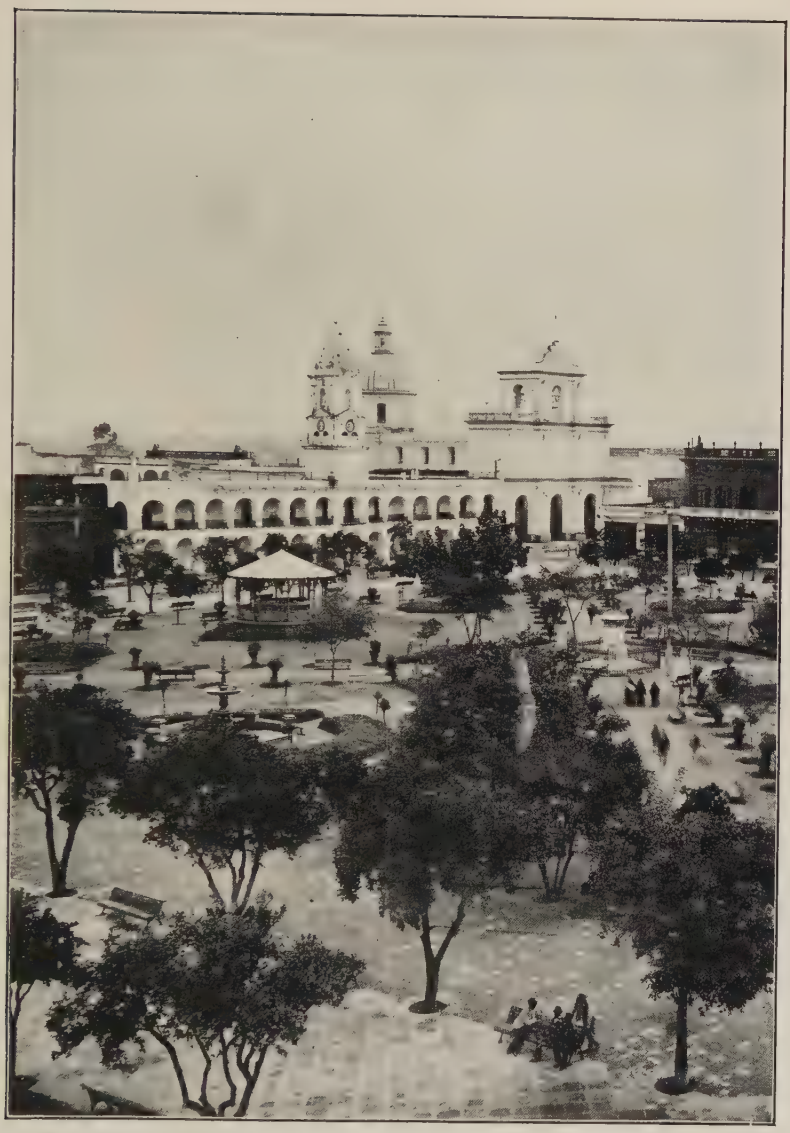
The capital and business centre of the province is the city of Tucumán, numbering ninety thousand inhabitants. It is one of the historic towns of the republic. In Buenos Aires was proclaimed Argentina's declaration of independence of Spain in 1810, and after years of fighting it was in Tucumán that the treaty of peace was signed and independence secured, July 9, 1816. The little cottage in which this event took place, "Casa Independencia," has been piously kept as a historic relic, but has been enclosed within a large and impressive modern edifice. One is expected to gaze with reverence on the chair occupied by the first president of the republic and at the bare room where the first congress assembled.

The old city has been much modernized. It claims, with Córdoba, the distinction of having much of the real old Spanish aristocracy of the country, and as a logical corollary boasts that its women are the most beautiful in South America. At the hour of evening promenade the throngs sauntering among the orange trees of the plaza or studying shop windows are much more distinctively

Spanish than are the crowds of Buenos Aires or Mar del Plata.

The labourers in the cane fields are mainly native Indians or half-breeds. As elsewhere, whole families work together at the harvest time. The man, armed with a great knife almost like a butcher's chopper, cuts off the stalk taller than himself near the root, swings it in the air, slashes off the leaves, and tosses it into the heap which the women and children gather up and carry to the wagons. At the mill the usual process is followed, the first machine squeezing out from these stalks the muddy-looking juice which is then cooked down and afterward treated with centrifugal motion in hot steel cups. The product, which looks at this stage like brown sand, needs more heat and refining processes to become white.

Nothing yields a quicker return for capital invested than sugar growing on a large scale. In Tucumán, after the land is cleared and irrigation is provided, the first crop pays. For three or four years the roots will produce well, and then there must be a gradual replanting to ensure a steady yield. Careful weeding is necessary and there are the contingencies of a locust visitation or a frost, but these are rare. Until a railroad connected Tucumán with the rest of Argentina, sugar growing was limited to the local needs, but as soon as it became possible to trade in the product the industry grew by leaps and bounds. The discovery of gold could scarcely have caused more activity in the hitherto sleeping town. People from all sections and all professions flocked to Tucumán to make their fortunes in sugar, and every other form of production was neglected. The sugar industry is still making great progress.



The Plaza Independencia in Tucuman takes its name from the fact that here in 1816 representatives of the provinces declared Argentina free from Spain. With Cordoba it is a centre for the descendants of the old Spanish aristocracy of colonial days.

The forest Indians of Corrientes province cannot be induced to do lumbering, but are being persuaded by the missionaries to raise corn and bananas. They sometimes work in the sugar harvest in the western part of the province.

Argentine cotton might be made of recognized value in the world market, though it would require not only capital but scientific management, trained labour, and patient waiting to put the country on the map as a cotton producer. Money can be made more quickly and easily in the long-established lines. The question of suitable labour would be especially difficult to meet. Cotton has been successfully grown in the Río de la Plata region, but the natives thought themselves imposed upon unless they were paid tremendous wages, because the work of picking seemed to them extremely hard and required much more care and steady application than they were capable of giving.

The fibre of Argentine cotton is considered of good grade, and the seeds yield an unusual amount of oil, but the cotton grower of to-day must be scientific and progressive to produce an article that will compete with the immensely improved varieties from the United States and Egypt.

Tobacco is another staple product which Argentina might grow in greater abundance for her own consumption. It has been grown from very early times, chiefly in the provinces of Tucumán, Salta, and Corrientes, but never on a large scale. As the Argentine leaf is rather coarse, the better qualities of cigars and cigarettes come from other countries, but in a country with every natural advantage it would seem that the six million dollars or more spent on importing this luxury might be kept at home.

It is rather surprising, likewise, to be told that Argentina imports large quantities of rice. A country of so many rivers has undoubtedly great tracts of land naturally

suitable for rice cultivation or easily made so. It is equally surprising to learn that the rice imported comes mainly from Italy, with some from the United States. The Argentineans are and always have been a meat-eating people and the cereals they produce are largely for export, but of late years the sale of meat products has been so profitable that the people are beginning to acquire the habit of eating more vegetable food. The Italian element naturally brings its racial custom of using meat sparingly, and in consequence there is said to be a demand for rice which is not yet met by the domestic supply.

The World War taught all nations the wisdom of self-dependence so far as possible in the matter of foodstuffs and raw materials for industries. There are such great natural diversities in climate and soil that no country can in this day become a hermit nation and continue to thrive, but a country so blessed by Nature as the Argentine will always stand as a creditor nation in respect to a large share of the necessaries of life.

It is a commentary on the motive of Spanish exploration and conquest that no land they discovered or colonized was considered of real value unless it gave promise of yielding gold or silver. All through the northern parts of South America they called each new region a land of gold, and the great river below Brazil they appear to have called La Plata in the hope that it would lead them to a land of silver. The hope was destined to bitter disappointment, but the name was firmly fixed, and when the South American countries achieved independence from Spain a large number of provinces were united under the name of the Republic of La Plata. For fifty years they were torn by local factions, the inland provinces

united only by a common jealousy of Buenos Aires and its supremacy. Just about the beginning of our Civil War the provinces finally split into the two republics of Uruguay and Argentina. The group of states known as Argentina still wished to keep its silvery name and formed the Argentine Republic.

If the Spaniards had only realized it, here were gold and silver aplenty to be had with comparatively little effort from this great, fertile country!

## CHAPTER XXXVII

### LAND BARONS AT THE SEASIDE

MAR DEL PLATA is the Palm Beach, the Newport, and the Atlantic City of this part of the world. It is two hundred and forty miles south of Buenos Aires on one of the finest ocean strands on the globe. The city lies in a little valley, with the high ground all around it covered with magnificent villas. A wide boulevard commands ocean views for many miles. The town has fine houses, magnificent hotels, and a club that cost a million dollars. There are extensive golf grounds, a race course where races are run almost daily, and an open camp where pigeon shooting is practised. At the various clubs are tables for roulette and other gambling games, while in the Casino one may lose or win a small fortune if he cares to bet on the turn of the wheel.

The town is not at all like any of our seaside resorts, and we might copy many of its arrangements to good advantage. It is like a series of palaces. "The Rambla," a wide promenade upon which the people stroll back and forth, is of artificial stone built in the lines of an ancient Greek temple with an esplanade for about a mile around the chief bathing quarter. The temple is perhaps thirty or forty feet high. It is a combination of Moorish and Grecian architecture and rises in the shape of a half moon around a stretch of beautiful sand. The entrance of stone,

upheld by stone columns, is magnificent, and through a grove of columns one passes on to the esplanade high above the beach. It is very wide and is bordered by a stone balustrade fit for the palace of a king, quite unlike the board walks of Atlantic City or Asbury Park, which have along them a jumble of buildings both mean and splendid.

At the rear of the Rambla is a long, arcaded structure about fifteen feet wide backed by the stores. It is paved with porcelain tiles and extends around the whole esplanade from one end to the other. The esplanade outside is thirty or forty feet wide. At the ends of the arcades and in the middle are mosque-like domes of stained glass that blaze with electric lights during the evening. In front of the stores is another roofed promenade upheld by magnificent columns. Fronting upon this are the plate-glass windows of the shops, which compare favourably with the best in Paris, New York, or London. Walking along the corridor is like going through the treasure vaults of a king. I doubt whether there is a richer place upon earth, in proportion to its population, than this little city. Most of its inhabitants are millionaire Argentineans, including many of the rich *estancieros*.

If you could see the shops in the Rambla it would remove from your mind any idea that South America is a part of the backwoods of the world, and, therefore, a market for the scrap and waste of factories in the United States. It would show you that the people demand the best of everything and that they have the money to pay for what they want. In these shops are exhibited the latest models of fashion from Paris. In the jewellery shops are diamonds and pearls so finely set that a single orna-

ment costs a king's ransom. I have never seen more magnificent jewellery. In one window are displayed diamond tiaras; in another there are solitaires as big as my thumb nail, and iridescent pearls twice the size of marrowfat peas. There are emeralds and rubies of wonderful beauty and many new and artistic combinations of precious stones. There are collars of emeralds and diamonds in which the emeralds form the central row with diamonds of pure water above and below. There are similar collars of sapphires and rubies, and marvellous diamond knots and bracelets. The shops of this kind on the Rambla are nearly all branches of the large jewellery houses of Buenos Aires, Paris, and London.

The confectioners display candy in caskets so beautifully inlaid that one may give his sweeetheart a present worth many dollars, though the contents are simply sweets. Some of the bon bons are imported from Paris, and the boxes are of ivory, of embossed leather work, and of satin and silk.

Even ordinary things are so put up that they cost a great deal. There are no "cheap John" shops with pinchbeck jewellery such as one finds at Atlantic City. The goods are for the rich, to whom price is no consideration. There are no marked prices in any of the shops, and you are expected to pay what is asked. Everything is high, but the purses of the visitors are long.

Walking along the Rambla one looks over the billows of the southern Atlantic rolling in. Down on the beach are hundreds of booths roofed with canvas. These are filled with people who sit and chat and have tea parties in sight of the surf. There are children playing outside, and in the ocean are bathers by hundreds. Indeed, the

views on the beach are not very different from those of our seashore resorts. Both sexes go bathing together. In this land the people are devoted to pleasure. They get their fun, however, in a more refined way than many of our people do. Mar del Plata has none of the freakish costumes or over-dressing of our seaside places. The bathing suits are usually black or dark blue, and modest in cut. There is no conspicuous dressing either on the promenade or on the beach, and as a rule the groups are either family parties or composed of only one sex.

The dressing rooms are under the esplanade, and the bathers walk through the crowds in the tents down to the ocean. Along the shore are racks of towels on which the swimmer wipes off his face, arms, and feet when he comes out. The usual bathing hours are from ten to twelve in the morning. In the afternoon you seldom see any one in the water, but at that time and in the evening many are strolling up and down the Rambla, anxious to show their fine clothes.

The crowds are worth seeing. I know of no place where one can meet so many fine-looking, well-dressed people at one time. The men look as though they had just come from the haberdasher's shop; the women wear Paris gowns, and there are scores of dresses with prices in three figures. There are hats that would be cheap at fifty dollars apiece, under which one may see jewels in quantity. These Argentine girls know how to wear good clothes, and most of them are wonderfully beautiful. They have dark liquid eyes, long black hair, and clear, creamy complexions. Most of them are tall and dignified, and they know how to walk. They are not bashful or backward, neither are they immodest, but they seem to be perfectly sure of themselves

and able to hold their own under all circumstances. Many of them have been educated in Europe, and in culture and bearing they would easily take front rank anywhere in the world.

The older people run to fat. There are gouty old men and plump dowagers who, if sold at their weight in gold, would need a Crœsus for buyer. The flesh of the older women lacks solidity, and their faces are pasty. They look as though if one pressed a thumb into them the dent would stay, as in putty.

The girls of the Argentine do not object to having their photographs taken. Indeed, buying snapshots of one's self and friends is a favourite pastime on the Rambla. There are a half-dozen photographers who set their cameras so that they can take pictures of the crowd as it passes. Their snapshots of individuals and groups are displayed in the windows next day. One can look over a whole window containing several hundred such pictures of postcard size, and above them read the date on which they were taken. A young man can buy a picture of his sweetheart, or of any girl he would like for a sweetheart, for forty-five cents, and a dozen of himself for eight Argentine dollars. The photographing is done on speculation, the idea being that when a visitor sees a photograph of himself or his friends he will order it.

The chief hours for strolling about the Rambla are just before breakfast and after dinner. By breakfast I mean the midday meal at about one o'clock. From eleven to one the esplanade is filled with hundreds of the best class of the Argentineans. The girls usually walk in groups and the young men by themselves.

Now and then one sees a young dandy strutting along

Like the United States, Argentina offers the most varied scenery, from the tropical landscapes of Corrientes to the chill steppes of Patagonia, or the flat prairies of the east and the giant peaks of the west.

Mar del Plata is the Palm Beach and Atlantic City of the Argentine. Its Rambla, or promenade, is far finer than any American boardwalk and is lined with shops displaying Paris models and princely jewels.

looking as though he owned the whole Argentine Republic, and behind him, perhaps, a young married couple who have come to celebrate their honeymoon at the shore. There are many middle-aged men, all carefully dressed, moving along in groups, and now and then a family, or young girls with their brothers and cousins. At the same time the seats on the esplanade are filled with parties chatting and other parties drinking tea or enjoying the sights of the beach. The crowd is more like a great family than the stiff and staid strollers at our resorts. The people seem to know each other.

The evening scenes are more beautiful than those of the morning. Mar del Plata at night is one of the gayest places in the world. The great hotel is ablaze with electricity and the Rambla is glorious. Its wide esplanade has long rows of electric lights resting like balls of fire upon the bronze columns of the balustrade. The tearooms and the promenade are crowded with people sitting about tables. The esplanade is thronged with people strolling back and forth, and the lights from the roofs of the arcade make it as light as day. Indeed, there are no such seaside surroundings anywhere else in the world. It makes one think of what Pompeii must have been at the height of its glory. It is more like an ancient Greek temple than a part of one of the newest of the new countries of South America.

The hotel life is interesting. The Bristol, where I am staying, is the most famous seaside hotel of the Argentine, with over seven hundred rooms, and dining room and parlours so large that they would cover at least half an acre. The hotel is built in the shape of a half moon facing the Rambla. The front is walled with glass, and there is a wide promenade under cover, which at night is filled

with gaily dressed people. There are dances in the ballroom, where a gypsy band plays. One may have his dinner as early as eight o'clock, but he will find few at the tables before nine, and they do not finish dining until ten. The men all wear evening dress, while most of the women are in low-necked gowns, although many also wear hats.

I was surprised at the number of families, and more surprised when I thought of the cost of this life. This is a resort of the rich, or of those who are so anxious to appear so that they will starve half a year to spend a month here in style. As the prices at the hotel are ten dollars a day and upward per person the *estanciero* with a family knows that it costs him more than the price of a fat steer for every day he stays. I pay twenty dollars a day for myself and my stenographer, a young man of twenty. We have a double-bedded room without bath, and all our water is brought to us in a pitcher. The furniture of the room would not sell for more than fifty dollars if put up at auction in Washington. Indeed, I have "to pay through the nose," as the Englishman says.

This is only one instance of the high prices of the Argentine Republic, especially of the prices at this seaside resort. Nearly everything is imported, and if any comment is made the merchants will talk about the heavy freight rates and the duties. Shaving soap is doubled in price, and safety razors are away out of sight. Photographs are especially high. An ordinary eight-by-ten print, which one can buy almost anywhere in the world for twenty-five cents, costs here two dollars and a half, and postcard photographs cost forty cents. Papers which sell for a nickel in the United States cost twenty-five cents at Mar del Plata, and a twenty-five-cent magazine costs

half a dollar. The common cab fare is fifty cents, but the automobile taxicabs are comparatively cheap.

All service is high. Shaves and hair-cuts are so expensive that it seems to me they charge by the hair, and I have just paid a manicure a rate equal to twenty-five cents for each nail on my hands. As I had been travelling on the *estancias*, my fingernails were so rough and stained that I asked the hotel porter to send me a manicure girl. He replied that there were few in the Argentine and, besides, it was hardly proper for a girl to hold a man's hand. He added, however, that there were men who made manicuring a profession, and that he would order one to come to the hotel. In due time came the manicure man. He was half an hour on the job, at the end of which he charged me five Argentine paper dollars, equal to about two dollars and a half of our money. The same service in Boston, Philadelphia, or Washington would have cost just fifty cents.

Last evening I strolled into the Casino and watched the gambling. Two tables were going, and one hundred men and women were sitting about them with great piles of chips before them. The chips were mother-of-pearl of different colours. They ranged in value from five to one hundred dollars, and I could see that a thousand dollars or so changed hands at every shuffle of the cards. The croupiers, dressed in black, and as sober-looking as parsons, announced the results in a singsong way that gave no indication of the amount staked on the throw, and the people took their losses and gains without demonstration. There are other gambling rooms at the different clubs; in fact, high play is a sort of national pastime of the Argentineans.

## CHAPTER XXXVIII

### ARGENTINE RAILWAYS

IT MAY seem strange to those who think of the Argentine as a wild pasture land with scattered grain fields to learn that it has twenty-two thousand miles of railroad. Argentina has almost one thirtieth of the railway tracks of the world. Its mileage is equal to one tenth that of all Europe and more than all the railways of Africa. Brazil is three times as big as Argentina, but it has only two thirds as much track, and Chile, with its longitudinal system, has a railway mileage of only about five thousand miles. The railways of Argentina if joined end to end would go seven times across the United States from ocean to ocean, and multiplied by twelve would surpass the mileage of the United States, which has by far the greatest railroad system in the world.

Notwithstanding this the Argentine railways are merely in their infancy. Most of them are long trunk lines running from one end of the country to the other. The towns are far apart, and one may ride for miles without seeing a house. A large part of Argentina is pasture land, which will some day be cut up into small farms and intensively cultivated and which, some day, too, will be gridironed with tracks like the prairie lands of the United States.

The railway traffic is necessarily small in proportion to the area; but nevertheless the freight carried mounts up to millions of tons. Most of it is made up of food products

going to market, and there is little traffic between cities and in the distribution of manufactured goods such as we have in the United States. Buenos Aires is the great railroad centre. The volume of the traffic may be gauged by the fact that more than five hundred passenger trains go out of the city every day. All the Argentine railroads together carry forty million tons of freight a year and about one hundred million passengers.

Most of the railways belong to British investors. They have put something like one thousand million dollars into such properties, and their roads are paying dividends of six per cent. a year and upward. Many of them were built upon a guarantee from the government of seven per cent., and they have received other favours in concessions and remission of duties. All railway materials come in free, and the government is encouraging the building of new roads and the extension of old ones. Some of the suburban lines have been electrified, among them those of the Central Argentine Railway Company, which carry something like fifteen million passengers a year.

One of the largest railroad systems is the Buenos Aires Great Southern, connecting the capital with some of the best lands of the Argentine, going south to Bahía Blanca, and tapping a large part of southern Argentina. This road has a capitalization of two hundred and fifty million dollars and a net income of about fifteen million dollars.

The Southern railway is now carrying six or seven millions of live stock a year. About one half of all the cattle that go to the freezing establishments come from the south. It has also a valuable summer-resort traffic. It has the chief line from Buenos Aires to Mar del Plata, the fashionable seaside city of Argentina, about two

hundred and fifty miles away. During the season there are afternoon express trains with parlour cars only and three trains of sleeping cars that run nightly. One has to engage his sleeping accommodations some time in advance. The rates of travel are high, as is everything connected with the town of Mar del Plata.

The Buenos Aires and Pacific railway is connected with the trunk line which crosses the Andes from ocean to ocean. It takes passengers from Buenos Aires to Valparaiso, a distance of nearly nine hundred miles. The Chilean part of the line is short, about seven hundred miles of the trip across the continent being on Argentine territory.

The Western railway has constructed two tube lines which land passengers right in the heart of Buenos Aires. In the beauty of their equipment these tubes are superior to anything we have in New York, and in efficiency they are fully equal to any tube lines of the world. In addition, a tube has been made for freight trains. This passes under the Avenida de Mayo to the plaza of that name, and then goes under the Calle Rivadavia and other streets, serving the business parts of the city.

Another important railway of Argentina is the Central. This has a capitalization of over a quarter of a million, and its gross earnings are something like fifty million dollars a year. It is a part of the system crossing the continent to Antofagasta in Chile. The Central has the highest gross earnings per mile of any line in Argentina, and pays dividends of six per cent.

The railways of Argentina are, generally, well built. The most common gauge is five and one half feet, but there are seven thousand miles of meter-gauge track. The broad gauge originated from the fact that the first line in the

country was built to fit an English locomotive whose wheels were five and one half feet apart. Most of the roads have been kept at that extraordinary width. Our roads are four feet eight and one half inches wide, or what is known as the standard gauge. The Argentine railways are ballasted with earth or clay.

The question of ties is important, since there are no trees on the great pampas. At first steel was used in laying the railroad tracks. Later the hardwoods of the Paraná and Paraguay rivers were tried. These woods will not float, and some are so heavy that a single tie will weigh two hundred pounds, and so tough that spikes cannot be driven into them. Holes have to be bored for the spikes before the rails can be fastened. The *quebracho*, meaning "axe-breaker," has been generally adopted for use as ties in all parts of Argentina. Besides its weight and hardness, it has the further advantage of not rotting when set in the ground, while it petrifies under water. Quantities of this wood are sent to the United States for use in tanneries.

Railroad building on the pampas is comparatively cheap. The country is so flat that a hundred miles of road-bed often needs but little grading. This is also true of parts of Patagonia, but there the dust storms are liable to cover the tracks, stopping the cars. The railroads use dust scrapers as we use snow ploughs. During a storm of a few years ago it took two thousand men to clear the track of one line.

I like railway travelling in the Argentine. The fares are higher than those of our country, but the cars are good and exceedingly comfortable. The seats are wider than ours, and those of the first class are upholstered in leather.

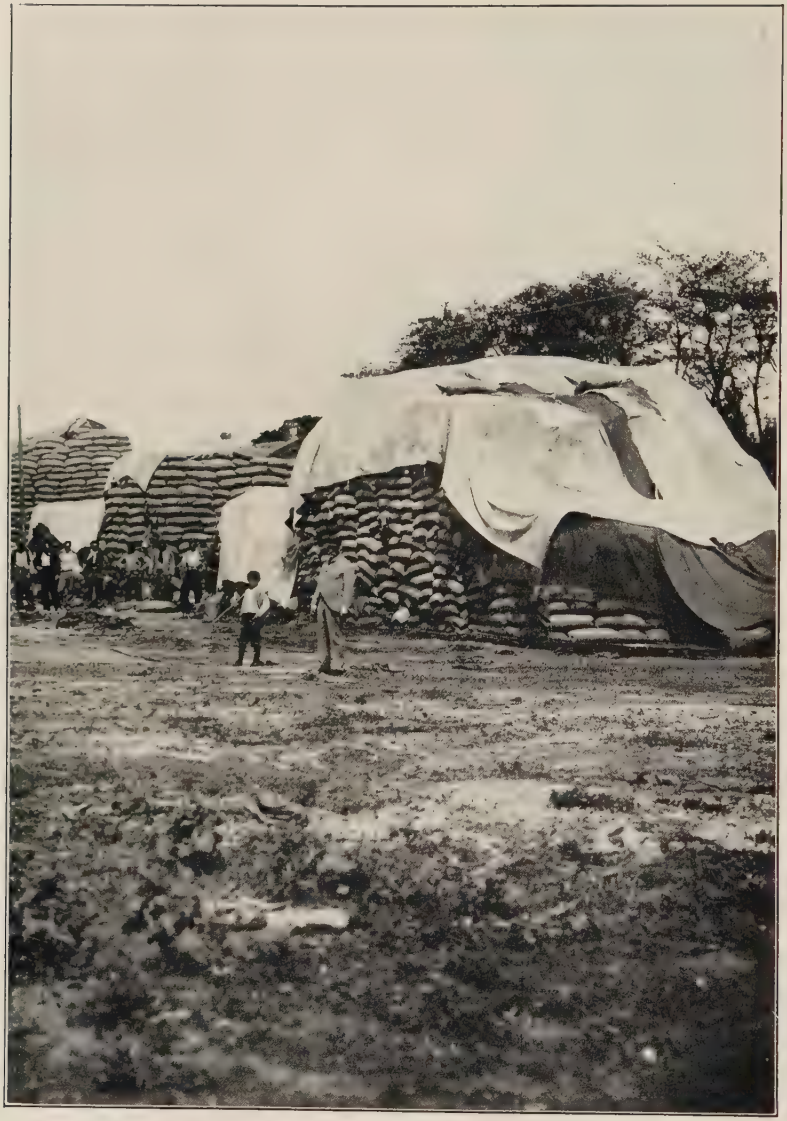
There are also chair cars and special sleeping compartments. On nearly every train tea is served in the afternoon. Most of the cars serve a table-d'hôte dinner at noon, with soup, fish, stewed chicken, roast beef with vegetables, and ice-cream, cheese, fruit, and coffee.

The compartment sleeping cars are so arranged that one has all the advantages of the drawing room of our Pullman coaches. If he is alone he can order the upper berth made up and have a good place to lie down during the day, and at the same time he has the seclusion of a private room. On some trains there is a sleeping car reserved for ladies, and on all the cars there are special compartments for smoking.

The trains usually carry one hundred and ten pounds of baggage free on each ticket, all additional weight being charged for at high prices. As I usually carry several trunks, my extra baggage has sometimes cost almost as much as my ticket. The great objection to some trains is the lack of heating apparatus during the long winter journeys, when the thermometer falls and the high winds increase the cold.

The two chief sources of Argentine traffic are live stock and grain. At almost any time of the year one may see long trains of cattle and sheep moving across the country. The cattle cars are better than ours. They open at the ends instead of at the sides, so that the cattle can be driven through the cars in single file from one end of the train to the other. This enables the stock to be loaded in a much shorter time than with us. The cattle are started in at one end. As soon as the first car is filled, the platform between it and the next car is raised and the second is filled; then the platform at the end of that is raised, and so

The Argentine women are beautiful, with dark, liquid eyes, long black hair, and creamy complexions. They are seen at their best among the smartly dressed throngs at Mar del Plata, the famous seaside resort.



Except at the ports, Argentina has not the equal of our system of grain elevators. In the country thousands of bushels of grain in sacks are often piled beside the railroad tracks to await shipment.

on. The unloading is equally simple. Some of the cars are double-deckers, so that many thousand animals may be carried in a train of ordinary length. Grain is usually carried in bags, and a great deal goes in open freight cars covered with tarpaulins to keep off the rain.

One of the big expenses in grain export is getting the product to the railroads. Most of it is carried upon bullock carts hauled by sixteen or twenty-four animals. The average wagon freight rate for comparatively short distances is a cent and a half per mile per hundredweight, so that if a man's farm is ten miles from a station, it costs him fifteen cents per hundredweight to get his grain there. As a result of this, most of the wheat farms are close to the railroads, the extra carting cost eating up the profits of those far away.

The labour on the Argentine railways is largely foreign. The roads are officered and managed by high-priced men from other countries. Some of the superintendents and general managers receive from twenty to thirty-five thousand dollars per year. Farther down the scale the salaries are rapidly reduced, and are seldom as large as those paid in the United States. There is a labour union of engineers and firemen known as "*La Fraternidad,*" or the Brotherhood. It is somewhat similar to the Brotherhood of Locomotive Engineers of the United States, and has had much to do with fixing railroad wages. More recently, the conductors, brakemen, stationmen, telegraph operators, and even the track gangs have organized unions also. The days are graduated by hours, the maximum working day under express orders being twelve hours, although in case of accidents or extraordinary occasions it may be longer.

The road construction is done mainly by Italian and Spanish labour, the Italians doing most of the contract work. The captain of a gang takes the contract by the job or yard, and is responsible for the work of his men. Upon one of the roads in Patagonia I saw twenty gangs of ten men each laying tracks. They were paid so much per mile. They carried their tents with them, and were supplied with food from a provision car, a little grocery or department store on wheels, fitted with shelves upon which were bottles of liquor and packages of tobacco, groceries, and clothes. It had a storekeeper, furnished by the company, and its goods were sold at reasonable rates. Among the chief articles of consumption was the native wine, without which the men will not work. This was sold at a few cents a bottle.

## CHAPTER XXXIX

### BUILDING A NEW EMPIRE

BAHÍA BLANCA is the New Orleans of the Argentine Republic. It is the metropolis of the south and all of the country below, down to Cape Horn, lies tributary. Naturally it is a great railroad centre with iron tracks going out like the veins of a leaf, and the terminal point for half-a-dozen projected routes across the Andes to Chile. The town has grown from a village of less than two thousand to nearly one hundred thousand, and promises to be one of the greatest of South American ports. Sometimes called the Liverpool of the Argentine, Bahía Blanca might be dubbed the Minneapolis as well. Its imports and exports amount to tens of millions of dollars a year and its flour mills and grain elevators are among the wonders of the continent.

The elevators have electric conveyors by which the grain can be loaded into a large number of steamers at one time, and on the docks are electric cranes and other facilities for handling cargoes. The town has one of the largest wool warehouses of the world, covering more than ten acres, with a storage capacity of over ten million pounds. There are immigrant hotels and employment bureaus and other facilities for developing the enormous area feeding to this port.

Southern Argentina is an empire in itself. These frontier lands at the lower end of the continent are to a

large extent unexplored, and form an important part of the backwoods of the Argentine. This great republic is so little known to our people that it is difficult for them to realize its extent. The country is as long as a straight line drawn from New York to El Paso, or from London to Constantinople, and at its widest part extends about as far as from New York to Chicago. The republic is divided into fourteen states and ten territories, most of which are comparable in area and resources to our largest states. The territory of the Pampa is larger than Illinois, Río Negro is as big as Kansas, Neuquén is the size of Virginia, and Chubut is larger than Utah. The territory of Santa Cruz, down in Patagonia, is as big as Nevada, and it would make two states the size of Illinois, while the Argentine slice of the island of Tierra del Fuego is as large as Massachusetts, and it has more good grazing land.

The great region south of Bahía Blanca is one of the chief areas of new development, and suggests our Far West of a generation or so ago. It is being rapidly settled. The Pampa Central, which lies west of the province of Buenos Aires, in the southern part of which Bahía Blanca is situated, once thought to be a desert, now has several millions of acres under cultivation, including a million acres of alfalfa and more than two million acres in wheat. It has vast pasture lands on which cattle and horses are raised. The province produces much corn and oats, and annually sells more than three million pounds of alfalfa seed at a price averaging about fifty cents per pound. The capital is Santa Rosa, a typical pampa town of seven thousand inhabitants.

I have seen something of the territories of the Río Negro

and the Neuquén. The latter will be opened up by the projected trunk lines, which will cross the continent from Bahía Blanca to the Pacific, connecting this region with lower Chile and making a short route from ocean to ocean. The railroad has been built as far as the town of Neuquén, the capital of the territory, and is being pushed toward the Andes. This road passes through a country much like Arizona and New Mexico. The land is practically a desert and needs irrigation or dry farming to make it thrive. The only cultivated portions are in the river valleys of the Colorado and the Negro, and the principal vegetation is sage brush and scrub. About the only animals to be seen are guanacos and rabbits, and the chief birds are ostriches, which are found almost everywhere in the South American desert. Farther west there are many sheep in the valleys and on the mountains wherever the many green spots occur.

Lake Nahuel Haupi, a beautiful sheet of water surrounded by pine-covered hills, is one hundred and fifty miles long and in some places more than fifteen hundred feet deep. Its fiords are like those of Norway, and Mount Tronador, with its snows and glaciers, is magnificent. Undoubtedly this picturesque spot will become a tourist resort. On one of the islands in the lake a wealthy family has a colony cutting the enormous amount of valuable timber, for which purpose they hold a ninety-nine-year lease from the government.

Almost all southern Patagonia is more or less suited to sheep raising. It is said that one can start on the mainland north of the Strait of Magellan and travel to Buenos Aires, stopping every night at the house of a farmer. There are sheep stations wherever there is water, and the

sheep feed on the bushes and the scanty grass of the pampas.

Two of the most important territories of Argentine Patagonia are Río Negro and Chubut. Both of these run from the boundary of Chile to the Atlantic and both have rich lands that can be made available for farming by the Río Negro and the Río Chubut. Río Negro is especially fitted for fruit growing, and its irrigated vineyards produce more than a million pounds of grapes and seventy-five thousand gallons of wine every year. The Río Negro country has an almost incredibly rich soil, but these tempting regions are subject to ruinous floods alternating with equally ruinous droughts. The irrigation projects carried out by the railroads for the national government have reclaimed and made productive a great area, where every crop known to the Temperate Zone can be grown in Californian abundance.

The Chubut territory has many rich valleys and its mountain slopes are well fitted for grazing. It has sheep and cattle by millions. Petroleum has been found but has been little exploited. The government is taking up the matter and has issued bonds to get the requisite capital for developing the industry. The whole province has long been considered an unprofitable member of the Argentine family. Its early Welsh settlement was Puritanic in its religious bigotry and more than Puritanic in its obstinate isolation. Only recently have these people been willing to sell their land to any foreigner, by which they meant Argentineans as well as people of other nationalities, or to allow intermarriage with any but those of their own or British blood. The estimated population of Chubut is barely one person to ten square miles. The

capital of the territory is Rawson, situated on the coast near the mouth of the River Chubut, and the chief port is Madryn, on a little gulf not far from the peninsula Valdez. Rawson has a weekly newspaper published in Welsh, and the colonists speak Welsh, English, and Spanish. The town has a football club and cricket and tennis clubs.

The province of Santa Cruz, just below Chubut, and extending down to the Strait of Magellan, produces millions of pounds of wool per annum, and there are packing houses at the port of Gallegos, where hundreds of thousands of sheep are slaughtered every year. It is one of the largest territories of Argentina, bigger than our state of Colorado. Its eastern boundary is the Atlantic and the coast is bleak and desolate. The land rises from the ocean and goes back to the Andes in a series of terraces. The southern portion has many fenced ranches and numbers of sheep. In the region of the Camerons alone there are a quarter of a million, and there are many large proprietors, mainly British, who seem to enjoy life in this out-of-the-world spot. There are also large sheep farms along the Río Gallegos, one with one hundred thousand acres and forty thousand sheep, and another four times as large which has sixty thousand sheep.

The sheep are generally of the Falkland and Romney Marsh breeds, crossed with Merinos. They are big, weighing from one hundred and forty to two hundred and twenty pounds. Their wool is famous. It is short and thick, protecting the animals against the cold winters. Some of the fleeces weigh as much as eight and ten pounds.

Santa Cruz has three ports. One is Desado, at the

mouth of the Desado River, another, Santa Cruz, at the mouth of the Chico River, and the third, Gallegos, at the mouth of the Gallegos River. Santa Cruz has only a few hundred houses built around a little harbour backed by hills. The houses are of wood and sheet-iron and some of them have been imported knockdown from Europe. The place is the site of a fish hatchery modelled after those of the United States, the fish being sent out to all parts of the republic. Gallegos, the capital of this territory, was named after the pilot on one of Magellan's ships, which called there at the time the Strait was discovered, about A. D. 1520.

There are regular steamers from Bahía Blanca to the Strait of Magellan, and once a month there is a vessel to Tierra del Fuego. The ship skirts the eastern side of the island and goes about its southern boundary through Beagle Channel to Ushuaia. The voyage lasts about forty-five days, and the fare is just about one hundred dollars. The ships call at all of the ports along the coast of Patagonia, and terminate the voyage at Ushuaia.

Ushuaia is sixteen hundred and seventy miles south of Buenos Aires, one hundred miles or so south of the Strait of Magellan, and lies more than one thousand miles farther south than the Cape of Good Hope at the tip of Africa. The town is a convict settlement and has a large prison for habitual criminals. The penitentiary has a sawmill and also workshops for locksmiths, carpenters, and shoemakers. It has a foundry, a printing office, and a bakery, and there is a quarry near by where building stone is got out for shipment to the north. The prisoners do the work of the community. They make the streets,

Argentina imports coal from the United States and England, but it costs so much that many of her locomotives use the hard quebracho wood. Some of the suburban lines running into Buenos Aires have been electrified.

New York is not more proud of the Pennsylvania or Grand Central stations than is Buenos Aires of the Retiro. The British own most of the Argentine railways, which have a mileage equal to one tenth that of all Europe.

The mountain slopes of Neuquen Territory are covered with the evergreen araucaria tree, thought to be suitable for paper-making. This region will be opened up with the extension of the railroad over the Andes to southern Chile.

build the houses, and operate a power plant which furnishes electric lights.

This prison colony at Ushuaia is the southernmost settlement of the world where any white men live the year round. With it I end the story of my travels in these lands that form The Tail of the Hemisphere.

THE END

# BIBLIOGRAPHY

AMONG the general volumes on Latin America in which information about both Chile and Argentina may be found are: "The Encyclopædia of Latin America," edited by Marrion Wilcox and George E. Reves, New York, 1917; "The South American Year Book," edited by C. S. Vesey Brown, London; James Bryce's "South America: Observations and Impressions," New York, 1912; and the "Argentine Year Book," Buenos Aires, which, though dealing primarily with Argentina, also contains chapters on Uruguay, Paraguay, and Chile. The "Bulletin of the Pan American Union," published monthly in Washington, D. C., is a valuable magazine source for facts about all Latin-American countries.

## CHILE

"Anuario General de Chile" (First Issue). Valparaiso, 1918.

CANTO, J. "Chile." London, 1912.

ELLIOTT, G. F. SCOTT. "Chile: Its History and Development." London, 1907.

ELLIOTT, L. E. "Chile: Today and Tomorrow." New York, 1922.

KOEBEL, W. H. "Modern Chile." London, 1913.

MAITLAND, F. J. G. "Chile: Its Land and People." London, 1914.

MILLS, G. J. "Chile." New York, 1914.

PARKER, W. E. "Chileans of Today." New York, 1920.

WINTER, N. O. "Chile and Her People of Today." Boston, 1912.

## ARGENTINA

BUNGE, A. E. "Los problemas económicos del presente." Buenos Aires, 1920.

# BIBLIOGRAPHY


Clemenceau, Georges. "South America Today." London, 1912.

Denis, Pierre. "La République Argentine." Paris, 1920.

Fraser, J. F. "The Amazing Argentine." New York, 1914.

Gordon, H. J. "Argentina and Uruguay." London, 1917.

Hirst, W. A. "Argentina" (4th edition). London, 1914.

Huret, Jules. "En Argentine" (2 vols.). Paris, 1913.

Koebel, W. H. "Argentina, Past and Present." London, 1910.
"The Great South Land." London, 1919.

Larden, Walter. "Argentine Plains and Andine Glaciers." London, 1911.

Martinez, A. B. "Baedeker of the Argentina Republic." London, 1916.

Mills, J. G. "Argentina." London, 1915.

Parker, W. B. "Argentines of Today" (2 vols.). New York, 1920.

Ross, Gordon. "Argentina and Uruguay." New York, 1916.

Skottsberg, Carl. "The Wilds of Patagonia." London, 1911.

Stephens, Henry. "Illustrated Descriptive Argentina." New York, 1917.

Tornquist, E. "The Economic Development of the Argentine Republic in the Last Ffty Years." Buenos Aires, 1919.

Winter, N. O. "Argentina and Her People of Today." Boston, 1911.

Year Book of the City of Buenos Aires. Published annually by the Municipality of Buenos Aires.

# INDEX

# INDEX


Aconcagua, Mount, highest in the New World, 143.
Aconcagua River, fed by glaciers, 140.
Alacaluf Indians of Strait of Magellan, 110.
Alfalfa, immense acreage of, in Argentina, 155, 219.
Andes, most wonderful of the highlands, 8; crossed by transcontinental railroad, 139.
Antofagasta, gateway to the copper and nitrate fields, 3; water supply of, 9; exports from, 10.
Ants, a pest in Argentina, 248.
Araucanian Indians, the story of the, 79; customs in the household, 82; missionary work among, 85.
Argentina, the grain fields, 156; export of food supplies to the United States and Great Britain, 158; comparison with the United States, 162; life of the working classes, 181; educational system modelled after that of the United States, 187; the government of the Republic, 188; educational system, 192; the press, 192; elaborate immigration provisions, 195; foreign trade, and opportunities for the United States, 203; banking on a large scale, 211; beef and butter shipments to American market, 224; export of dairy products, 229; horse breeding and racing, 232; wheat growing and export, 239; production and shipment of mutton, 249; railway systems, 274.
Ascotan, Lake, largest known reservoir of borax, 7.
Armour & Co., packing houses at Buenos Aires and La Plata, 224.
"Army of the Andes", colossal granite group at Mendoza, 152.
Automobiles, demand for in Chile, 31; use of, limited in Argentina, 205.
Bahía Blanca, southern metropolis of Argentina, 281.
Banks, American, in Argentina, 210.
Beef, shipments of, from Argentina to New York, 224.
Bethlehem Steel Company, iron deposits near Coquimbo, 26; efforts in developing American trade with west coast, 32; extent of ore properties, 33.
Boers, colony of, in Argentina, 201.
Bolivia, the high plateau of, 5.
Borax lakes of Chile, 7.
Braden copper mines, largest in the world, 33.
Buenos Aires, fastest-growing city of the world, 164; one of the oldest in the New World, 168; great amount of shipping, 169; the city government, 170; excessive taxes, 171; high life of the city, 172; sports and racing, 176; the cemeteries, 176; high-class newspapers, 192.

Cape Froward, lowest point of continental land, 102.
Carancho, the bird pest of the sheep raiser, 257.
Cattle industry, growth of, in Argentina, 222.
Chile, comparative length of, 23; area, 24; climate, 25; American trade, with 30; how the republic is governed, 46; the military, 51, 58; among the people, 53; class distinctions, 55.
Chile Copper Company, mines at Chuquicamata, 3, 33.
"Christ of the Andes," the beautiful statue on boundary between Chile and Argentina, 145.
Chubut territory in Patagonia, richness of, 284.
Chuquicamata, copper mines of, 3, 33; building a modern town at, 34.

# INDEX


Coal, the Lota mines near Concepción, 76; demand for, in Argentina, 205.
Cog railroad on Transandine system, 142.
Collahuasi, richest copper mines in South America, 9.
Colonists, no opportunity for American, 92.
Concepción, metropolis of southern Chile, 73.
Condor, the giant vulture, 256.
Corn, in Argentina, 156; as an export crop, 160.
Corral, the port for Valdivia, 89.
Cotton, opportunity in growing of, in Argentina, 263.
Cousino family, immense estate of the, 63; fortune founded on Lota coal mines, 77; income from silver and copper mines, 78.
Customs tariffs in Argentina, 209.

Dairy farms of Chile, 62, 63.
Dairy products, export of, from Argentina, 229.
Denoso hacienda, great dairy farm of, 63.
Drunkenness, among Chilean peasantry, 57.

Earthquakes, at Valparaiso, 18; at Concepción, 73.
Eastman, Don Thomas, large dairy of near Valparaiso, 63.
Educational system of Argentina, 192.
Edwards, Augustin, stock farms of, 62.
Eucalyptus, nursery production of, 66, 68.
Eucalyptus forest, on San Juan *Estancia*, 215.

Falkland Islands, history and their sheep industry, 129.
Farm lands, prices of, in Argentina, 202.
Farm machinery, mostly from the United States, 92; demand for in Argentina, 204.
Farming in central valley of Chile, 60.
Forests, extensive, of southern Chile, 90; of Tierra del Fuego, 123.
Foreign settlements in Argentina, 201.
Foreign trade of Argentina, and opportunities for the United States, 203.
Fruit trees, production of nursery stock on large scale, 66.
Fruits, possibilities of shipping to United States markets, 65, 70, 149.

Gambling, public, in Argentina, 273.
Gaucho, the Argentine, 237.
Glaciers of Tierra del Fuego, 105.
German settlements in Brazil and southern Chile, 87; colony in Argentina, 201.
Gold mining in Tierra del Fuego, 123.
Grace & Co., W. R., largest owners in nitrate syndicate, 11; fleet of ships for South American trade, 35; business in exports and imports, 36; their store at Valdivia, 88; build tunnel through Andes, 145.
Grain fields of eastern Argentina, 157.
Grapes, culture of, at Mendoza, 148.
Guggenheim copper mines, near Antofagasta, 3, 26, 33.

Hebrews, settlements of, in Argentina, 201.
Homesteading, little inducement for Americans, 92, 199.
Horses, breeding of, in Argentina, 232; racing, 233; origin of the Argentine horse, 235.
Hotel prices in Argentina, 208.
Huanchaca, silver mines at, 9.

Immigration, elaborate provision for, in Argentina, 195; the "swallow" immigrant, 198; small inducement for Americans, 199.
Inca Bridge, a natural formation in the Andes, 144.
Indian tribes of Patagonia and Tierra del Fuego, 110, 124.
Iquique, dependence upon nitrate industry, 16.
Irrigation, in the central valley, 60, 61; the Mendoza River a valuable source, 148; new projects in Argentina, 207.
Italians, comprise one fourth of Argentina's population, 181, 183.
Izquierdo, Don Salvador, fruit king of Chile, 65.

# INDEX


Jesuit Church, Santiago, burning of, 44, 50.
Jews, colonization of, in Argentina, 201.
Jockey Club, of Buenos Aires, 233, 234.
Juan Fernandez Islands, visited, 26.

La Martona, world's biggest butter farm, 229.
La Paz, travelling from, to Oruro, 4.
*La Prensa*, palatial offices and public benefactions, 193.
Labor organization, in Chile, 59; in Argentina, 185.
Land-holding system, evils of, in Argentina, 200.
Live stock on San Juan *estancia*, 214, 252.
Live-stock shows, interest in, in Argentina, 221.
Locusts, a plague in Argentina, 244.
Lota, extensive coal mines at, 73, 76.
Lumber of Chile, of inferior quality, 90.

Macul Hacienda, of the Cousino family, 63.
Magellan, Strait of, the passage through, 102.
Mar del Plata, leading seaside resort of Argentina, 266, 275.
Meiggs, Henry, extensive railway building in Chile, 100.
Mendoza, city of, an oasis of vineyards, 147.
Mendoza River, a silt carrier from the Andes, 144.
*Mercurio*, chief of Santiago's newspapers, 45.
Mount Aconcagua, highest mountain in the New World, 143.
Mutton, production of, in Argentina, 249.

Newspapers of Chile, 45.
Nitrate deposits of Chile, value and extent, 10; theory of origin, 12; process of mining and refining, 13.
Nursery stock production on large scale, 66.

Ona Indians, of Tierra del Fuego, 124.
Oruro, a thriving town, 6.
Oxen, use of as draft animals, 91.

Packing houses, American, at Buenos Aires and La Plata, 224.
Pampas, travelling over the, 155; development of, 282.
Paraná River, wheat lands along the, 239.
Patagonia, southern, from the Strait of Magellan, 104; agricultural possibilities of, 162; development of, 284.
Pereyra *estancia*, a vast stock farm, 214.
Persimmons, being introduced into Chile, 69.
Petroleum, industry to be developed in Patagonia, 284.
Port Stanley, capital of Falkland Islands, 136.
Puerto Montt, a city more German than Chilean, 88; southern terminus of railroad, 94.
Punta Arenas, southernmost city of the world, 114.

Quebracho wood, used for railroad ties throughout Argentina, 277.

Racing, at Santiago, 42; of great interest in Argentina, 233.
Radio stations of Chile, an extensive system of, 114.
Railroad material, demand for in Chile, 32.
Railroads, the Longitudinal System, 94; government ownership not a success, 95; privately owned roads giving better service, 96; difficulties of road building, 97; future development, 98.
Railway systems of Argentina, 274.
Railway travel, in Argentina comfortable cars and good service, 277.
Rhea, or South American ostrich, 257.
Rice, opportunity in growing, in Argentina, 264.
Río Blanco, at beginning of cog railroad over Andes, 142.
Río Negro, rich lands of, in Patagonia, 284.
Robinson Crusoe's Island, visit to, 26.
Rosario, the wheat port of Argentina, 239.
Russians, colony of, in Argentina, 201.

San Juan, famous *estancia*, visited, 214.
San Martín, commemorated by colossal group at Mendoza, 152.
San Pedro and San Paulo, volcanoes of, 7.
Santa Cruz, province of, the sheep industry, 285.
Santa Lucía, the mountain park of Santiago, 37.
Santiago, the heart of Chile, 37; early-closing practice of merchants, 89.
Sarmiento Glacier, Tierra del Fuego, 102, 105.
Seaside resort of Mar del Plata, 266, 275.
Selkirk, Alexander, monument to, on Juan Fernandez Islands, 27.
Sheep, extent of the industry in southern Chile, 116; in the Falkland Islands, 130; importance of the industry in Argentina, 249; in Patagonia, 285.
Siloli Spring, source of Antofagasta's water supply, 9.
Stock breeding on San Juan *estancia*, 214.
Suárez, Inés, the Joan of Arc of Chile, 80.
Sugar production of Tucumán, 260.
Swift & Co., packing houses at La Plata, 224.
Swiss, colony of, in Argentina, 201.

Tierra del Fuego, glaciers of, 105; sheep industry of, 117; the country described, 121;
Tin mines, of Nyuni, Oruro, and Potosí, 3.
Tobacco, opportunity in growing, in Argentina, 263.
Toro, Don Santiago de, immense estate of, 63.
Tower, Dr. Walter S., theory of origin of nitrate deposits, 12.
Trade with Chile, American, 30; some mistakes in, 36.
Transandine route from coast to coast, 139; upkeep of road tremendous, 143; project originated by the brothers Clark, 144.
Tucumán, sugar producing centre, 260

Ushuaia, a convict settlement, 286.
Uspallata Pass, highest point of trail over Andes, 141, 144.

Valdivia, a city more German than Chilean, 88.
Valdivia, General, difficulties with the Araucanian Indians, 80; death by torture, 81.
Valparaiso, chief Pacific port of South America, 18.
Vegetables, grown at Mendoza, 154.
Vina del Mar, chief summer resort of the west coast, 22.
Vineyards in the central valley, 62; at Mendoza, 147.

Wheat, chief cereal of Chile, 91; archaic methods of production, 92; from the Paraná section, 239.
Wheelwright, William, builds first railroad in South America, 35, 99; efforts to utilize coal deposits at Concepción, 77; plans transandine railway, 144.
Wine, production of, at Mendoza, 150.
Women, position of, in Argentina, 186.
Women workers: conductors on street cars, 21; in office positions, 54.
Wool, production of, in Argentina, 249.

Yaghan Indians of Tierra del Fuego, 125, 126, 127.
Yankee enterprise on the west coast, 30.